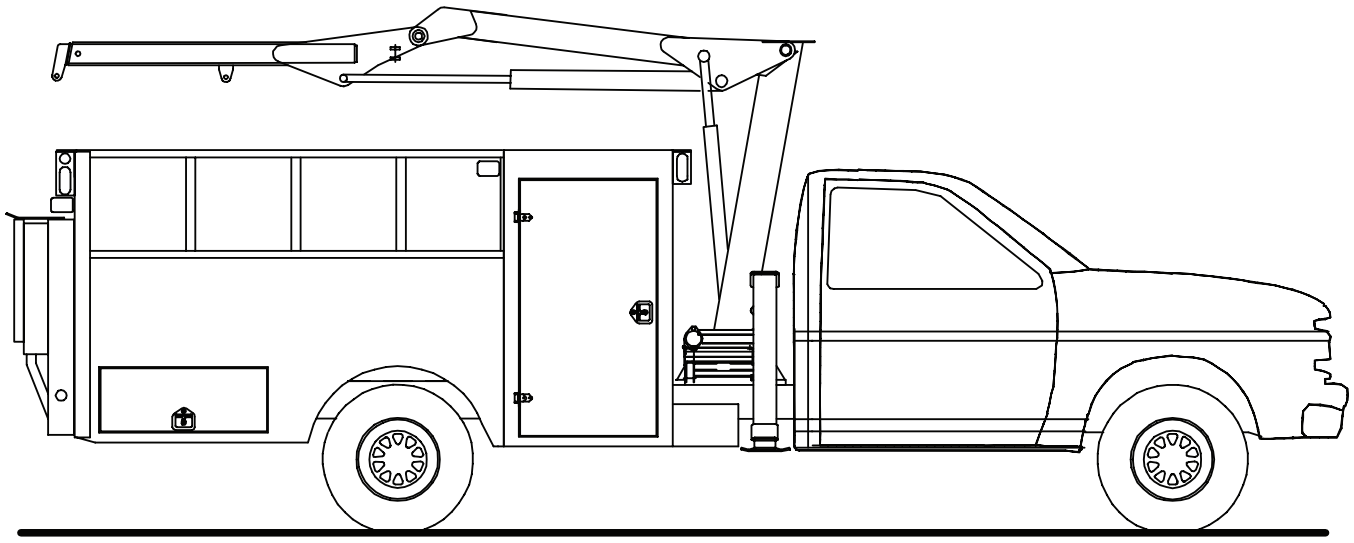
PREDATOR

Models 8511 (with crane) & 8513 (without crane)

PARTS AND SPECIFICATIONS

SECTION 1. SPECIFICATIONS
SECTION 2. BODY COMPONENTS
SECTION 3. AIR SYSTEM COMPONENTS
SECTION 3A. PTO AIR COMPRESSOR
SECTION 4. ELECTRICAL COMPONENTS
SECTION 5. LIFTGATE
SECTION 6. CALCIUM CHLORIDE SYSTEM



IOWA MOLD TOOLING CO., INC.
BOX 189, GARNER, IA 50438-0189
CUSTOMER SERVICE TEL: 1-800-554-4421
FAX: 1-641-923-2424
MANUAL PART NO: COMPOSITE PREDATOR

SERIAL NUMBERS PRED991001 TO PRESENT.

REVISIONS LIST

DATE	LOCATION	DESCRIPTION OF CHANGE
20020416	ALL	MANUAL RELEASE - COMBINED PREDATORS
20020416	3-12	ADDED 52715970, NEW AIR TANK DRAIN ASM.
20020520	3-12	ECN 8923 - 52715970 CHANGED FOR 8511, 52717633 ADDED FOR 8513
20021204	2-20	ECN 9023 - PAINTED DRAWERS
20021230	3B-6	ECN 9090 - 99903452 AIR END ASM CHANGES
	3B-32	ECN 9015 - ADDED NEW PTO OPTION FOR FORD 6.0L TRANSMISSIONS
20030130	3B-11	ADDED SUB-ZERO OPERATION INSTRUCTIONS
20030310	2-9-11	ECN 9151 - CHANGED ROD GUIDE ASM LOCATION
	2-27	ECN 9077- ADDED 51717984 TO MANUAL
	3B-33	ECN 9140 - CORRECTED PTO NUMBER - WAS 70570579, SHOULD BE 70570576
20030408	3B-30,31	ECN 9161 - UPDATED DECALS 70396160, 70396166 AND REPLACED 70395315 (P. 31) WITH 70396381
20030505	2-11	CORRECTED DOOR PART NO. ON 52715712 ASM
	3-18	ECN 9157 - ADDED CURRENT HOSE REEL KIT 51706347
	3B-7,33	ECN 9172 - ADDED BOLT TO PANEL ASM; CHANGED DESC OF FORD MANUAL ON PTO CHART
20030605	3-1,4,7	ECN 9157-1 - CHANGE REELS FROM REELCRAFT TO HANNAY
20030620	3B-33	CHANGES TO PTO/DRIVELINE KITS
	4-8,15	ECN 9195 - NEW FORD 2002 WIRING COLORS
20030707	3A-26	ADDED OIL TO SPARE PARTS LIST
	4-15	ECN 9195 - CORRECTED REVERSED WIRING COLORS
20030718	5-13	ADDED BUSHING 71410461 (2) TO LIFTGATE REPL. PARTS
20030731	3B-25	ADDED NEW INFO. REGARDING PTO/ENGINE STOP ON RELAY MODULE
20030825	3B-6	ECN9214 - UPDATE TO 99903452
	3B-10	ECN 9229 - UPDATE TO 99903411
	3B-34	ECN 9222 - UPDATE TO VALUE PLUS 8500 KIT
20030929	3B-33	ECN 9254 - CHANGE TO PTO ON ALLISON ENGINE, NEW DRIVELINE FOR GMC 4500/5500 W ALL.
	6-7	ECN 9000 - REORIENTED FITTINGS ON 51716138
20040126	2-6	UPDATED CURRENT INSTALLATION, 41715869-1
	1-3	UPDATED SPECIFICATIONS FOR DIFFERENT CHASSIS
20040823	3-11	ECN 9532 - UPDATE TO FLR ASSEMBLY FOR NEW HOSE ROUTING
20050601	3B-3-5; 4-12 THRU 16	ECN 9792 - CHANGE TO 51717794; ECN 9673 - CHANGE TO 99903409
	3B-34; 2-13,15	ECN 9736 - CHANGE TO PM KIT AND DECAL
20051020	2-3,4,26	ECN 9788 - ADDED SHIMS TO MOUNT CHEVY, GMC CHASSIS. ADDED FUEL FILL 99903710.
20131204	2-24	ECN12083 - UPDATED 51715984 DRAWING AND BOM

PARTS ORDERING INFORMATION

Before placing an order, take the time to record the following information. This information should then be given to an IMT representative when placing your order.

BODY MODEL NUMBER:

BODY SERIAL NUMBER:

PART NUMBER, DESCRIPTION AND QUANTITY REQUIRED:

If left or right side is applicable, please specify.

Contact IMT at the following address:

IOWA MOLD TOOLING CO., INC.
BOX 189, GARNER, IA 50438-0189
CUSTOMER SERVICE TEL: 1-800-554-4421

SERIAL NUMBERS PRED991001 TO PRESENT.

CRITICAL WEAR PARTS AVAILABILTIY

Your Predator has designated critical maintenance and repair parts that can be shipped from IMT on the next business day or sooner. Listed below are the designated parts. When ordering these as needed please advise the customer service representative that you need these shipped the next day or sooner.

NOTE: These critical wear parts are used on units with serial numbers PRED991001 through PRED021073.

COMPRESSOR ITEMS

P/N	DESCRIPTION
300854	Air filter element
301400	Hydraulic cooler
70733401	Air cooler
300989	Fan assembly (1999 only)
301921	Fan assembly (2000 - 9/02)
301261	Thermal valve (8511)
300005	Oil filter element
	Temperature gauge switch
301421	N/C pressure switch
301422	N/O pressure switch
300023200	Relief valve
300057	Regulator
300715	Valve, blowdown (1999 only)
310827	Valve, blowdown (2000 - 9/02)
301466	Cap, fill tube
300331	Coalescer head
301670	Coalescer element
300154153	U-joint
301576050	Pump
301409	Shaft seal
300186003	Inlet valve repair kit
300187	Regulator repair kit
302138-025	Compressor Cool-Blue Oil - Quart
302138-300	Compressor Cool-Blue Oil - Case
301409	Pump seal kit

BODY ASSEMBLY

P/N	DESCRIPTION
77041653	Load gate switch
77041497	Load gate solenoid
73050169	Load gate cylinder
3169910	Load gate cylinder seal kit
73051885	Load gate power unit
70073310	FRL assembly
70048206	Air filter
70073439	FRL assembly (Prev. model)
70073376	Air filter
72661510	Door latch - 2 point
72661512	Door latch - 3 point
70733408	Hose reel
77040408	Wireless light control transmitter
77040407	Wireless light control receiver
77040404	Flood light
77040410	Strobe light head assembly
77040384	Compartment light
77040411	Strobe control unit
70048015	Gauge-press air 300# Cntr mnt
70048036	Gauge-press air 300# Btm mnt

CRANE ASSEMBLY

P/N	DESCRIPTION
73733393	Wireless crane remote transmitter
73733392	Wireless crane remote receiver
70733354	Wireless crane control kit
70145624	Valve section / coil
70145858	Proportional valve
70145626	Proportional valve coil
9B101414	Cylinder seal kit, inner cylinder
9C141820	Cylinder seal kit, outer cylinder
9B101220	Cylinder seal kit, extension cyl
73540049	C'balance valve, 4:1 vented
73054304	C'balance valve, 7:1 non-vented
73054004	Check valve (extension cyl)
73540052	C'balance valve, 1.75:1 non-vented
73540060	Needle valve
71073920	Swivel hook

SERIAL NUMBERS PRED991001 TO PRED021073.

CRITICAL WEAR PARTS AVAILABILTIY

Your Predator has designated critical maintenance and repair parts that can be shipped from IMT on the next business day or sooner. Listed below are the designated parts. When ordering these as needed please advise the customer service representative that you need these shipped the next day or sooner.

NOTE: These critical wear parts are used on units with serial numbers PRED021074 to present.

COMPRESSOR ITEMS

P/N	DESCRIPTION
70048217	Air filter element
73052128	Air/hydraulic cooler
70733695	Fan assembly
73540113	Thermal valve
70048214	Oil filter element
70048224	Temperature gauge switch
77041638	N/C pressure switch - 5 lb
77041639	N/O pressure switch - 20 lb
73054032	Relief valve
73540109	Regulator
73540110	Valve, blowdown
60124690	Cap, fill tube
60124515	Coalescer head
73733692	Coalescer element
70149781	U-joint
73511011	Pump
94534345	Shaft seal kit-B101 (Super Duty, other manual transmissions)
94744113	Shaft seal kit - B101G (Allison automatic transmissions)
94744114	Bearing kit - B101G (Allison automatics)
90488228	Inlet valve repair kit
90488229	Regulator repair kit
89086192	IMT brand compressor oil - quart
89086201	IMT brand compressor oil - gallon
77041647	Switch - High Temperature
77041645	Switch - Fan

BODY ASSEMBLY

P/N	DESCRIPTION
77041653	Load gate switch
77041497	Load gate solenoid
73050169	Load gate cylinder
3169910	Load gate cylinder seal kit
73051885	Load gate power unit
70073310	FRL assembly
70048206	Air filter
70073439	FRL assembly (Prev. model)
70073376	Air filter
72661510	Door latch - 2 point
72661512	Door latch - 3 point
70733731	Hose reel - curbside application
70733732	Hose reel - streetside application
77040408	Wireless light control transmitter
77040407	Wireless light control receiver
77040444	Strobe headlight assembly
77040465	Strobe headlight bulb
77040445	Strobe light power control unit
77040384	Compartment light
70048015	Gauge-press air 300# Cntr mnt
70048036	Gauge-press air 300# Btm mnt

CRANE ASSEMBLY

P/N	DESCRIPTION
73733393	Wireless crane remote transmitter
73733392	Wireless crane remote receiver
70733354	Wireless crane control kit
70145624	Valve section / coil
70145858	Proportional valve
70145626	Proportional valve coil
9B101414	Cylinder seal kit, inner cylinder
9C141820	Cylinder seal kit, outer cylinder
9B101220	Cylinder seal kit, extension cyl
73540049	C'balance valve, 4:1 vented
73054304	C'balance valve, 7:1 non-vented
73054004	Check valve (extension cyl)
73540052	C'balance valve, 1.75:1 non-vented
73540060	Needle valve
71073920	Swivel hook

TORQUE DATA CHART

FINE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (FT-LB)	SAE J429 GRADE 5 PLATED (FT-LB)	SAE J429 GRADE 8 PLAIN (FT-LB)	SAE J429 GRADE 8 PLATED (FT-LB)
5/16-24	0.3125	19	14	27	20
3/8-24	0.3750	35	26	49	35
7/16-20	0.4375	55	41	78	58
1/2-20	0.5000	90	64	120	90
9/16-18	0.5625	120	90	170	130
5/8-18	0.6250	170	130	240	180
3/4-16	0.7500	300	225	420	315
7/8-11	0.8750	445	325	670	500
1-12	1.0000	645	485	995	745
1 1/8-12	1.1250	890	670	1445	1085
1 1/4-12	1.2500	1240	930	2010	1510
1-3/8-12	1.3750	1675	1255	2710	2035
1 1/2-12	1.5000	2195	1645	3560	2670

COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (FT-LB)	SAE J429 GRADE 5 PLATED (FT-LB)	SAE J429 GRADE 8 PLAIN (FT-LB)	SAE J429 GRADE 8 PLATED (FT-LB)
5/16-18	0.3125	17	13	25	18
3/8-16	0.3750	31	23	44	33
7/16-14	0.4375	49	37	70	52
1/2-13	0.5000	75	57	105	80
9/16-12	0.5625	110	82	155	115
5/8-11	0.6250	150	115	220	160
3/4-10	0.7500	265	200	375	280
7/8-9	0.8750	395	295	605	455
1-8	1.0000	590	445	910	680
1 1/8-7	1.1250	795	595	1290	965
1 1/4-7	1.2500	1120	840	1815	1360
1-3/8-6	1.3750	1470	1100	2380	1780
1 1/2-6	1.5000	1950	1460	3160	2370

When using the torque data in the charts above, the following rules should be observed.

1. Bolt manufacturer's particular specifications should be consulted when provided.

2. Flat washers of equal strength must be used.

3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.

4. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, collodial copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.

5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

WARNING

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatique causing serious injury or DEATH.

SERIAL NUMBERS PRED991001 TO PRESENT.

SECTION 1. SPECIFICATIONS

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NOTES

SERIAL NUMBERS PRED991001 TO PRESENT.

SPECIFICATIONS
Models 8511 & 8513
Commercial Fleet Body

GENERAL SPECIFICATIONS

CHASSIS CAB-TO-AXLE (CA)		
8511 w/crane, 8513 w/o crane	84 - 88" *	213.4 - 223.5 cm *
8513 w/crane	108-110" *	274.3 - 279.4 cm *
* Distance dependent on chassis model		
CHASSIS GVWR		
Model 8511	17,500 lb	7937 kg
Model 8513	15,000 lb	6805 kg
BODY CUBIC CAPACITY		
Model 8511	259 cubic feet	7.33 cubic meters
Model 8513	309 cubic feet	8.75 cubic meters
TIRE HAULING CAPACITY	Twenty 11R24.5 Two 33.25-29	Twenty 11R24.5 Two 33.25-29
AVAILABLE PAYLOAD		
Model 8511	5344 lb	2424 kg
Model 8513	4764 lb	2160 kg
LIFTGATE CAPACITY	1600 lb	725 kg

COMPARTMENT SPECIFICATIONS

LEFT FRONT COMPARTMENT (A) (Air reels, tools)	63"H X 36"W X 23.5"D 30.84 cubic feet	160 X 91.4 X 59.7 cm .87 cubic meters
LEFT FRONT COMPARTMENT EXTENSION (C) (Tire bars, tools)	9"H X 14"W X 18"D 1.31 cubic feet	22.9 X 35.6 X 45.7 cm .04 cubic meters
RIGHT FRONT COMPARTMENT (B) (Storage, drawers)	63"H X 36"W X 23.5"D 30.84 cubic feet	160 X 91.4 X 59.7 cm .87 cubic meters
RIGHT FRONT COMPARTMENT EXTENSION (D) (Blocks, tools)	9"H X 14"W X 18"D 1.31 cubic feet	22.9 X 35.6 X 45.7 cm .04 cubic meters
LEFT REAR COMPARTMENT (E) (Tool storage)	15"H X 40"W X 21"D 7.29 cubic feet	38.1 X 101.6 X 53.3 cm .21 cubic meters
RIGHT REAR COMPARTMENT (F) (Tool storage)	15"H X 40"W X 21"D 7.29 cubic feet	38.1 X 101.6 X 53.3 cm .21 cubic meters
RIGHT REAR JACK BOX (G) (Jack storage, torque)	10.25"H X 16"W X 50"D 4.74 cubic feet	26.0 X 40.6 X 127 cm .13 cubic meters
CARGO/PAYLOAD AREA (H) (Tires, rims, payload)	41"H X 95"W X 127.5"D 76.12 square feet (8511)	104.1 X 241.3 X 323.8 cm 7.07 square meters(8511)
Note: Compartment dimensions are nominal.	41"H X 95"W X 149.5"D 90.63 square feet (8513)	104.1 X 241.3 X 379.7 cm 8.42 square feet meters

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BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711
TECHNICAL SUPPORT FAX: 641-923-2424

SERIAL NUMBERS PRED991001 TO PRESENT.

MODEL 8511

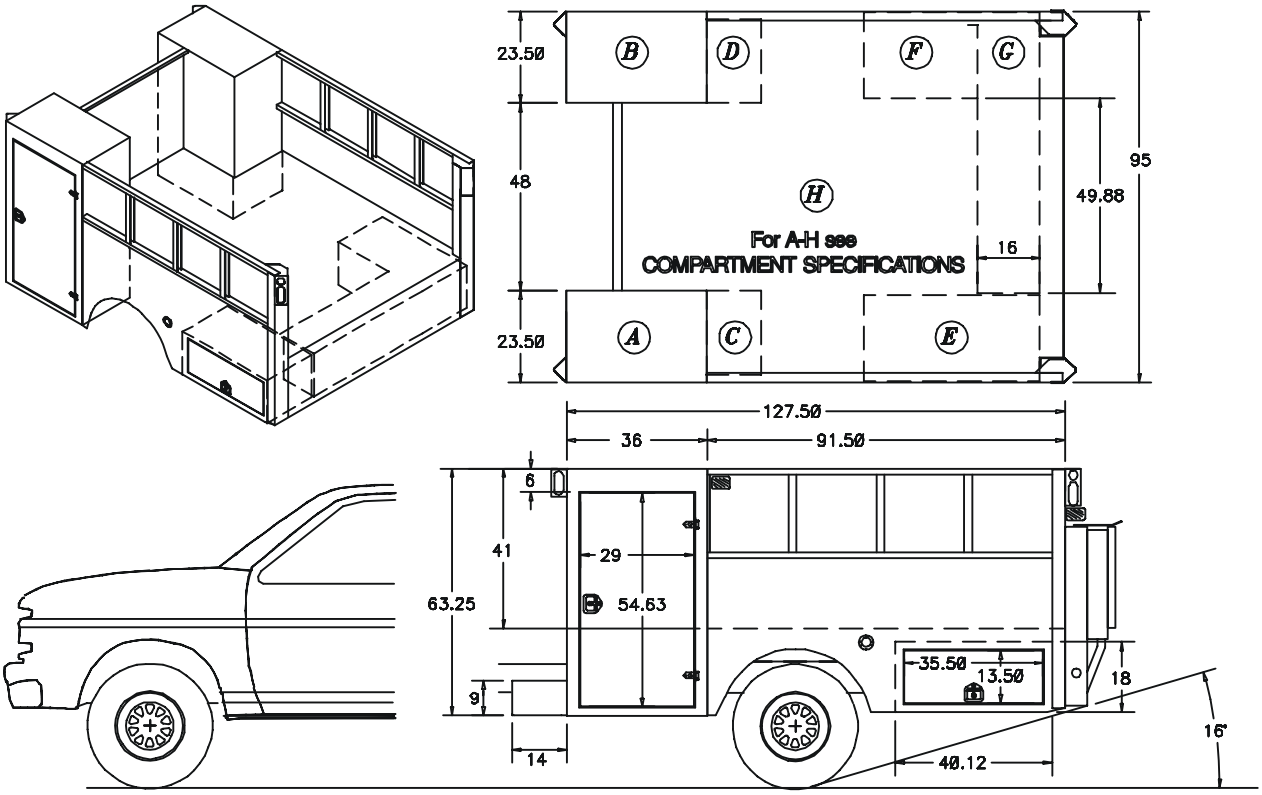
STANDARD FEATURES

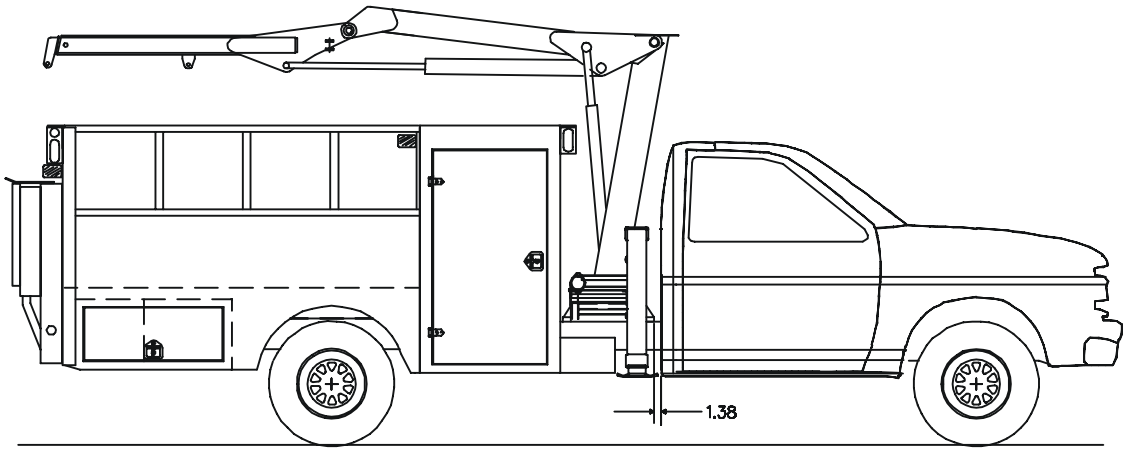
- 1/2” x 50’ hose reel (2)
- 1/2” moisture separator/regulator/oiler
- Amber strobe light each corner
- Four 12V floodlights
- Four compartment lights
- Back-up alarm
- ICC safety kit
- Hour meter
- Adjustable shelving
- Wireless controlled lights
- Compartment weatherproofing
- Polished stainless steel T-handle latches
- Stainless steel hinges
- Body mounting kit
- Integrated electrical control system
- Automotive style wiring harness
- Truck-Lite® light and reflector kits
- Rubber matting on compartment floors and shelves

OPTIONAL EQUIPMENT

- Cab caddy
- Commercial fleet tool package
- Dual 1/2” air line coupler plumbing
- 400 gallon portable calcium chloride system
- Liftgate side rail and tire stop
- Two-bar fold-up tire inflation cage with body installed carrying bracket and 6’ inflation hose
- Customer identification
- Rack extension kit to 72” high

IMT reserves the right to change specifications and design without notice.





SERIAL NUMBERS PRED991001 TO PRESENT.

MODEL 8513

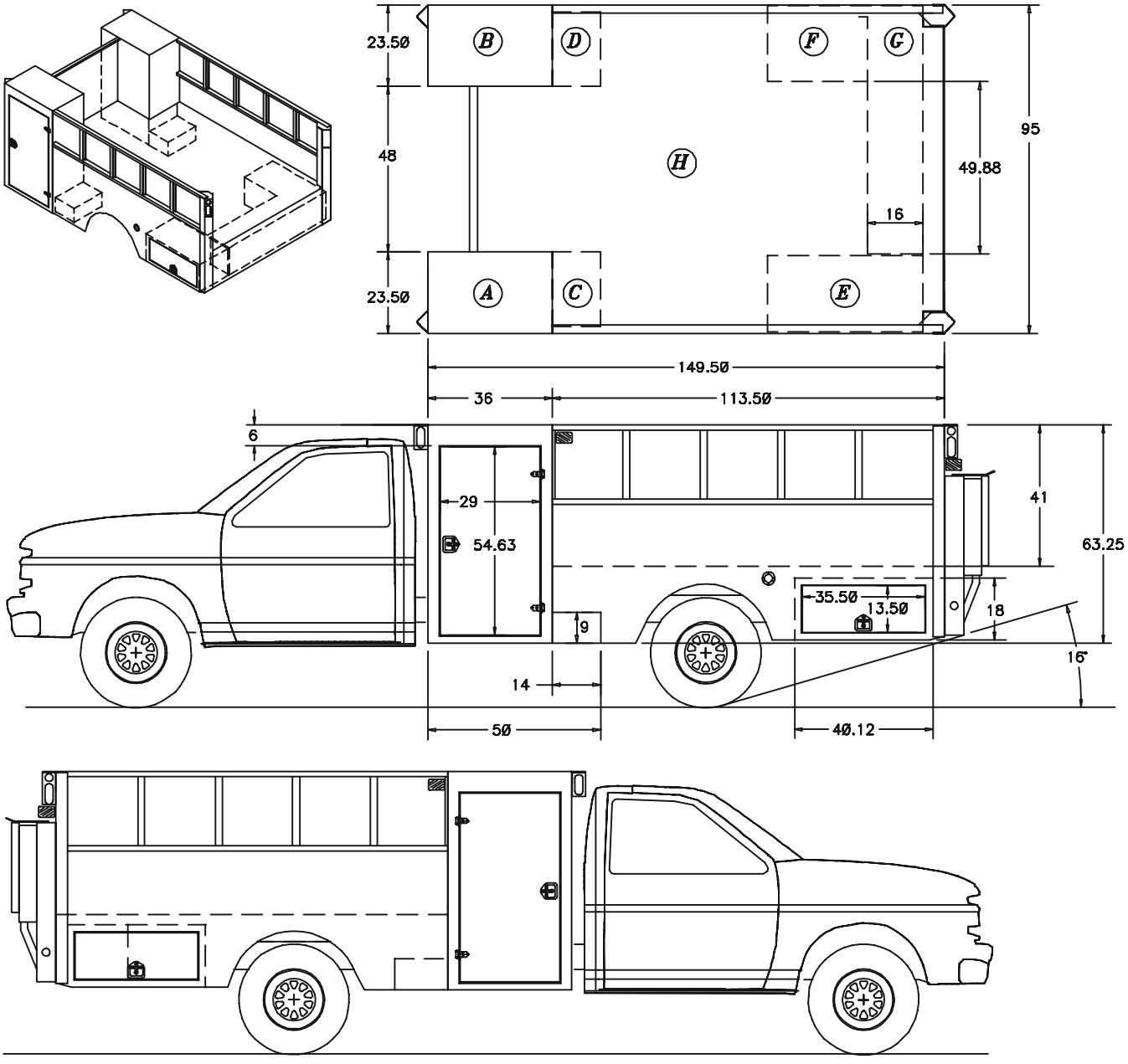
STANDARD FEATURES

- 1/2” x 50’ hose reel (2)
- 1/2” moisture separator/regulator/oiler
- Amber strobe light each corner
- Four 12V floodlights
- Four compartment lights
- Back-up alarm
- ICC safety kit
- Hour meter
- Adjustable shelving
- Wireless controlled lights
- Compartment weatherproofing
- Polished stainless steel T-handle latches
- Stainless steel hinges
- Body mounting kit
- Integrated electrical control system
- Automotive style wiring harness
- Truck-Lite® light and reflector kits
- Rubber matting on compartment floors and shelves

OPTIONAL EQUIPMENT

- Cab caddy
- Commercial fleet tool package
- Dual 1/2” air line coupler plumbing
- 400 gallon portable calcium chloride system
- Liftgate side rail and tire stop
- Two-bar fold-up tire inflation cage with body installed carrying bracket and 6’ inflation hose
- Customer identification
- Rack extension kit to 72” high

For A-H see
COMPARTMENT SPECIFICATIONS



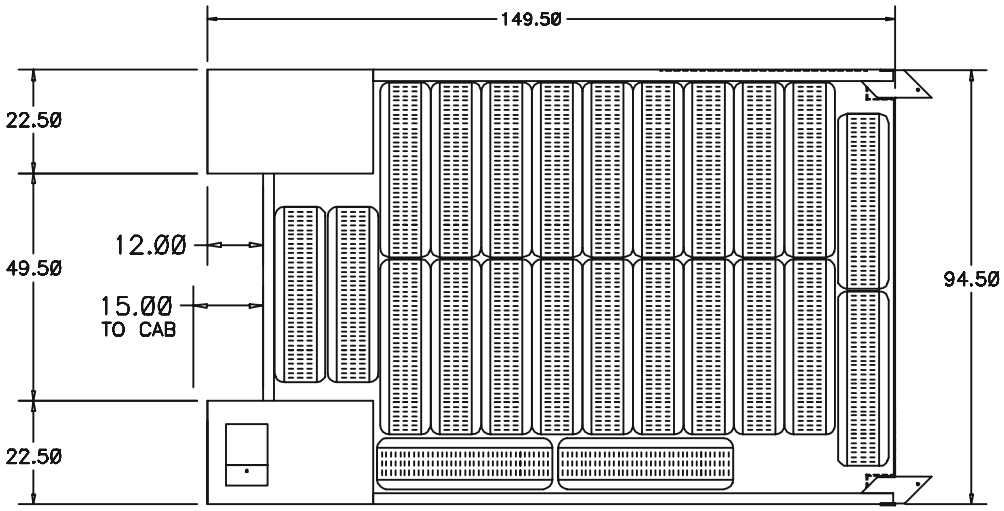
SERIAL NUMBERS PRED991001 TO PRESENT.

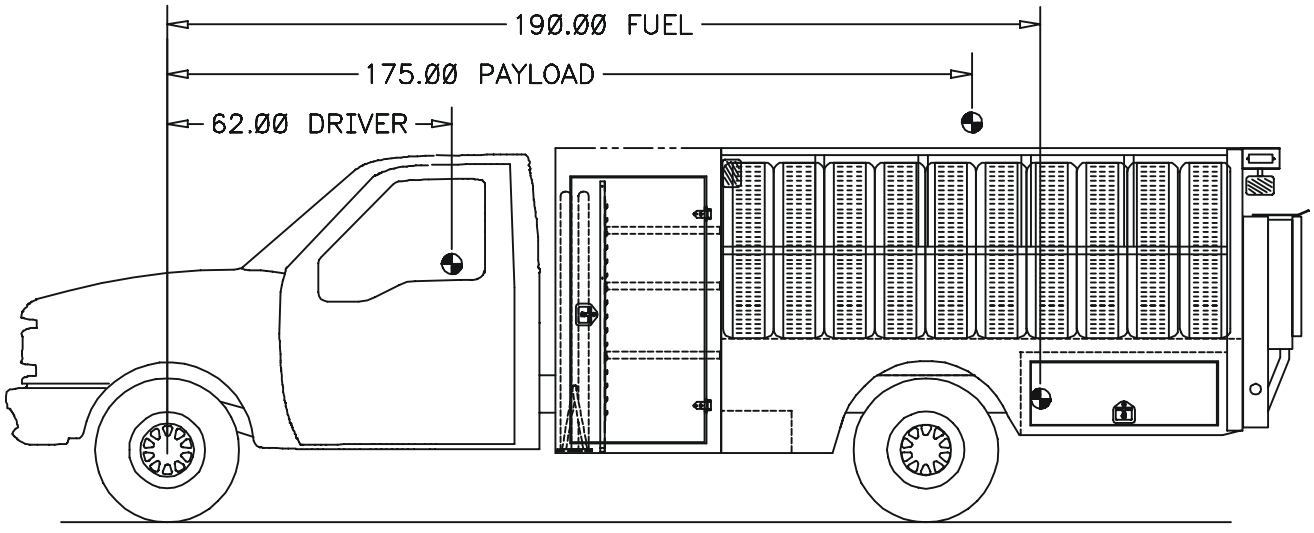
CHASSIS INFORMATION-F350

CHASSIS MAKE & MODEL	FORD SUPER DUTY F350
CHASSIS MODEL YEAR	2000
WHEELBASE	164.80”
CAB TO AXLE	84.00”
GVW RATING	12,500 LBS
FRONT AXLE RATING	4,850 LBS
REAR AXLE RATING	8,600 LBS

WEIGHT DISTRIBUTION

CTR LINE LOCATION	COMPONENT DESCRIPTION	COMPONENT WEIGHT	WT ADDED FRONT AXLE	WT ADDED REAR AXLE
	EMPTY UNIT WT W/BODY & CRANE	9,010	3,860	5,150
A	DRIVER	250	156	94
B	FUEL (38 GAL)	266	-41	307
C	PAYLOAD	2,688	-166	2,854
	COMPLETED UNIT WEIGHT	12,214	3,809	8,405





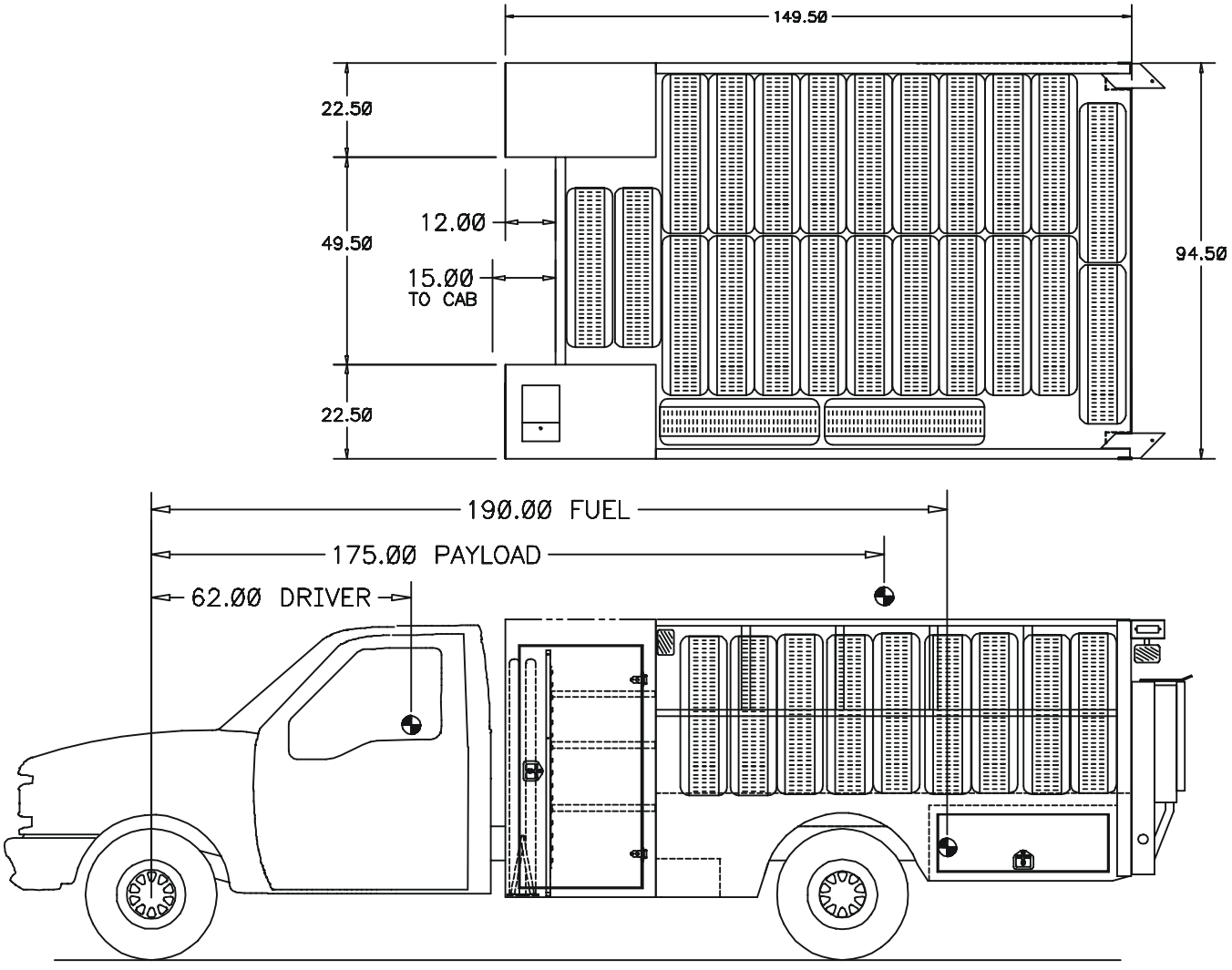
SERIAL NUMBERS PRED991001 TO PRESENT.

CHASSIS INFORMATION-F450

CHASSIS MAKE & MODEL	FORD SUPER DUTY F450
CHASSIS MODEL YEAR	2000
WHEELBASE	164.80”
CAB TO AXLE	84.00”
GVW RATING	15,000 LBS
FRONT AXLE RATING	5,790 LBS
REAR AXLE RATING	10,880 LBS

WEIGHT DISTRIBUTION

CTR LINE LOCATION	COMPONENT DESCRIPTION	COMPONENT WEIGHT	WT ADDED FRONT AXLE	WT ADDED REAR AXLE
	EMPTY UNIT WT W/BODY & CRANE	9,010	3,980	5,420
A	DRIVER	250	156	94
B	FUEL (38 GAL)	266	-41	307
C	PAYLOAD	2,688	-166	2,854
	COMPLETED UNIT WEIGHT	12,604	3,929	8,675
	REMAINING AVAILABLE PAYLOAD	2,076	-129	2,205
	TOTAL VEHICLE WT W/MAX PAYLOAD	14,680	3,800	10,880



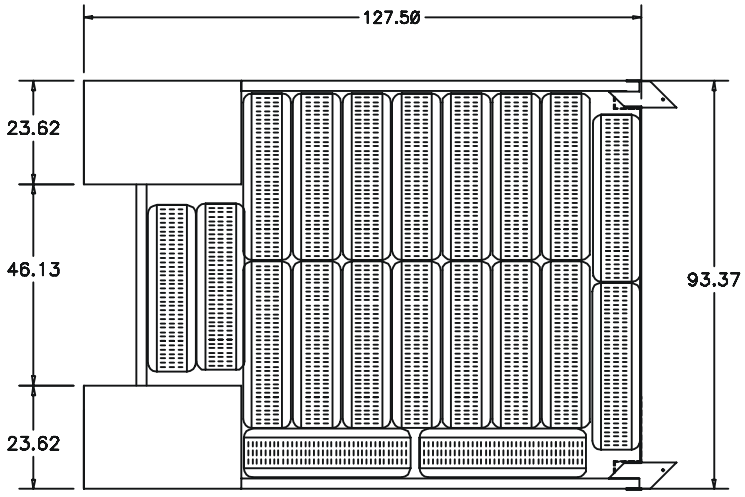
SERIAL NUMBERS PRED991001 TO PRESENT.

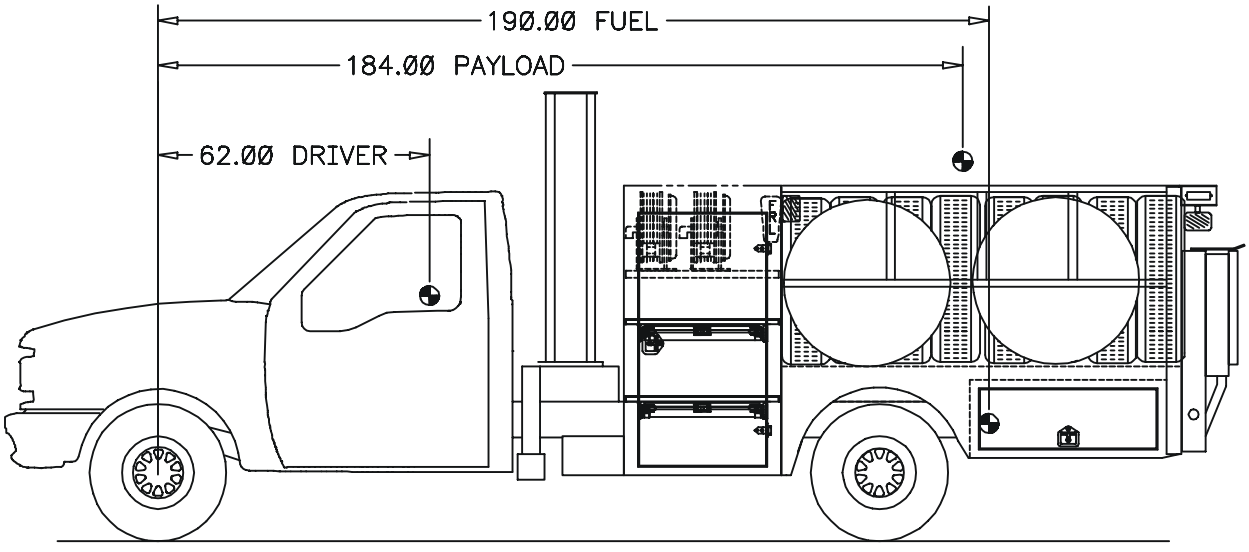
CHASSIS INFORMATION-F550

CHASSIS MAKE & MODEL	FORD SUPER DUTY F550
CHASSIS MODEL YEAR	2000
WHEELBASE	164.80”
CAB TO AXLE	84.00”
GVW RATING	17,500 LBS
FRONT AXLE RATING	6,000 LBS
REAR AXLE RATING	13,500 LBS

WEIGHT DISTRIBUTION

CTR LINE LOCATION	COMPONENT DESCRIPTION	COMPONENT WEIGHT	WT ADDED FRONT AXLE	WT ADDED REAR AXLE
	EMPTY UNIT WT W/BODY & CRANE	11640	4630	7010
A	DRIVER	250	156	94
B	FUEL (38 GAL)	266	-41	307
C	PAYLOAD	2240	-261	2501
	COMPLETED UNIT WEIGHT	14396	4484	9912
	REMAINING PAYLOAD AVAILABLE	3104	-362	3466
	TOTAL VEHICLE WT W/MAX PAYLOAD	17500	4122	13378





SERIAL NUMBERS PRED991001 TO PRESENT.

SECTION 2. BODY COMPONENTS

INSTALLATION KIT-W/CRANE-2000 FORD (93715374) - 8511 3
INSTALLATION KIT-2000 FORD (93715720) - 8513 4
INSTALLATION-BODY/CRANE/FORD SUPER-DUTY (41715869-1) - 8511 5
INSTALLATION REFERENCE DWG-CRANE BASE/BODY 5
INSTALLATION-BODY/FORD SUPER-DUTY (41715869-1) 6
INSTALLATION REFERENCE DWG-CRANE BASE/BODY 6
INSTALLATION-BODY/CRANE/FORD SUPER-DUTY (41715869-2) -8511 7
INSTALLATION-BODY/CRANE/FORD SUPER-DUTY (41715869-3) - 8511 8
INSTALLATION KIT-PREDATOR 8516/FORD SUPER-DUTY (99904044) 9
BODY ASM-W/CRANE (51715371) - 8511 10
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DECAL KIT (51715853) - 8513 (THRU PRED021073) 13
DECAL KIT (51715853) - 8513 (PRED021074 ON) 14
DECAL KIT (51715852) - 8511 (THRU PRED021073) 15
DECAL KIT (51715852) - 8511 (PRED021074 ON) 16
DRAWER ASM 3H X 26W X 16D SGL PULL (51716628) (THRU PRED021073) ... 17
DRAWER ASM 1-3” H X 26” W X 16” D SGL PULL (51715842) 18
DRAWER ASM 2-3” H X 26” W X 16” D SGL PULL (51715864) 19
DRAWER ASM 2-3” H X 13” W X 16” D SGL PULL (51716628) 20
SHELF PACKAGE - PREDATOR W/O CaCl2 SYSTEM (51715867) 21
SHELF PACKAGE - PREDATOR W/O CaCl2 sYSTEM (51717217) 22
SHELF - PREDATOR W/ CaCl2 SYSTEM (51715868) 23
I.C.C. SAFETY KIT (92091010) 24
RACK EXTENSION KIT-72” (51715984) - 8513 24
INSTALLATION KIT-F550 19000 GVW (93716272) 25
INSTALLATION KIT-F550 19000 GVW (93716273) 26
INSTALLATION DW - DUAL FUEL TANKS - FORD SUPER-DUTY (99903407) 27
FUEL FILL, CHEVY/GMC (99903710) 27
TIRE INFLATION / PRESSURE CHECK TOOL ASM (51717984) 28

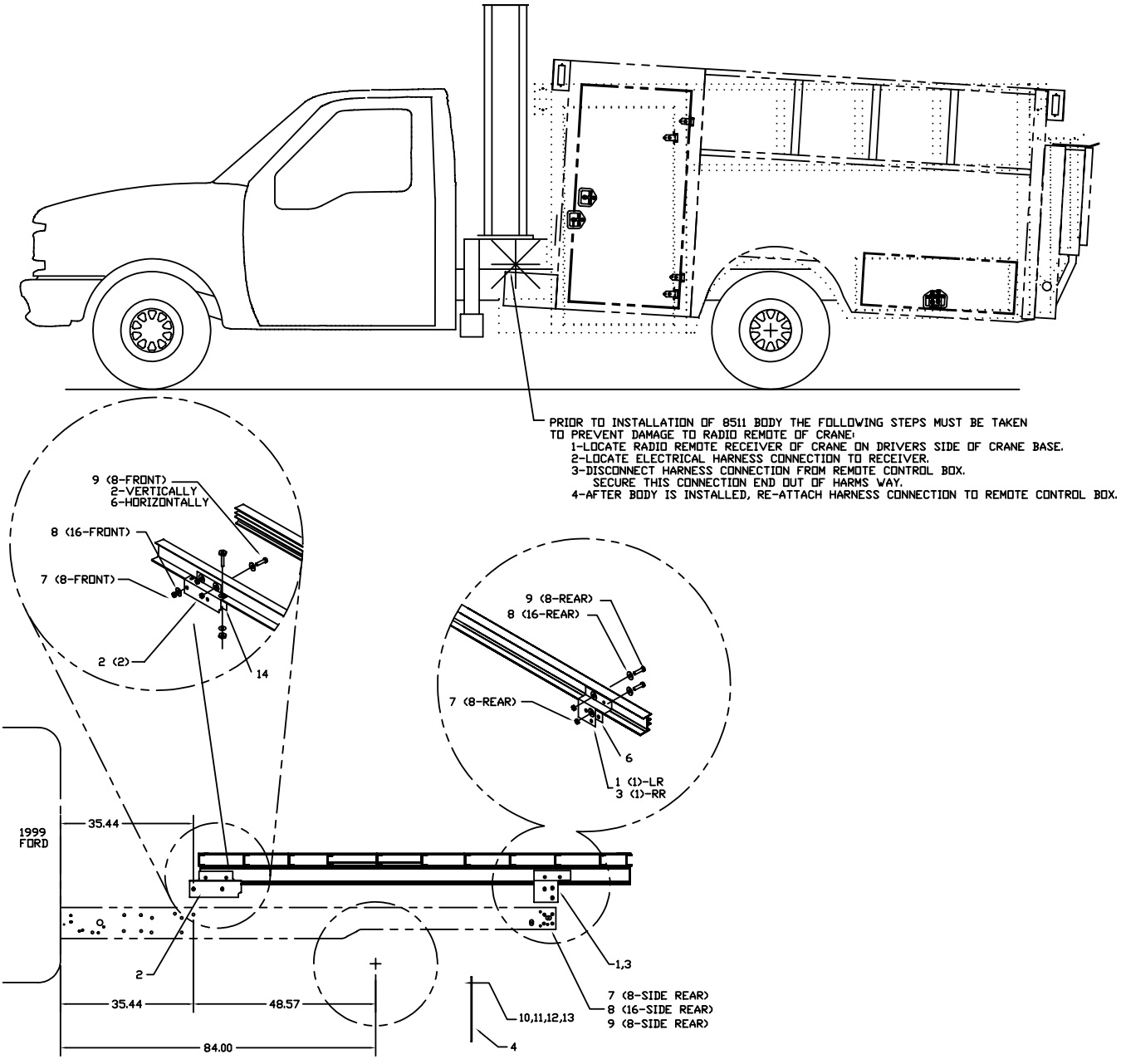
NOTES

MODEL 8511

INSTALLATION KIT-W/CRANE-2000 FORD (93715374) - 8511

1.	60122077	BRACKET-REAR MTG-LH REAR	1
2.	60122088	BRACKET-FRONT MTG W/CRANE	2
3.	60122091	BRACKET-REAR MTG-RH REAR	1
4.	76395819	MUD FLAP	2
5.	51716036	HARDWARE KIT	1
6.	60125330	SHIM, REAR	A/R
7.	72062275	NUT 9/16-12 HEX TOP LOCK GR8	16REF
8.	72063117	WASHER 9/16 FLAT HARD	32REF
9.	72601144	CAP SCR 9/16-12X2 HHGR8	16REF
10.	72060004	CAP SCR 1/4-20X1-1/4 HHGR5	6REF *
11.	72062104	NUT 1/4-20 LOCK	6REF *
12.	72063001	WASHER 1/4 WRT	6REF *
13.	72661471	WASHER 1/4X1 OD FENDER	6REF *
14.	76395819	MUD FLAP	2

* PART OF PREDATOR BODY ASSEMBLY



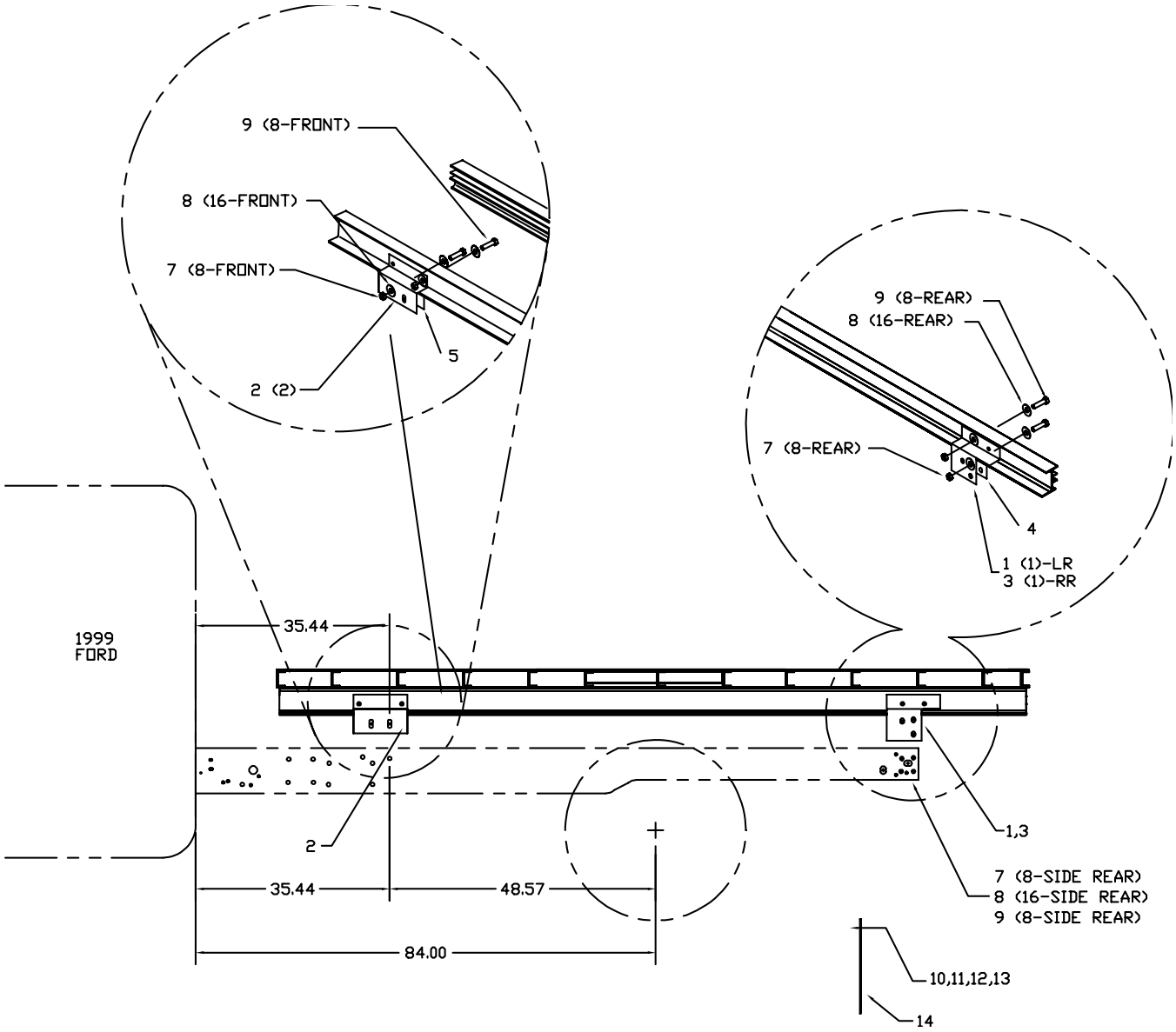
SERIAL NUMBERS PRED991001 TO PRESENT.

MODEL 8513

INSTALLATION KIT-2000 FORD (93715720) - 8513

1.	60122077	BRACKET-REAR MTG-LH REAR	1
2.	60121229	BRACKET-FRONT MTG W/CRANE	2
3.	60122091	BRACKET-REAR MTG-RH REAR	1
4.	60125330	SHIM, REAR	A/R
5.	60125332	SHIM, FRONT	A/R
7.	72062275	NUT 9/16-12 HEX TOP LOCK GR8	16
8.	72063117	WASHER 9/16 FLAT HARD	32
9.	72601144	CAP SCR 9/16-12X2 HHGR8	16
10.	72060005	CAP SCR 1/4-20X1-1/4 HHGR5	6 *
11.	72062104	NUT 1/4-20 LOCK	6 *
12.	72063001	WASHER 1/4 WRT	6 *
13.	72661471	WASHER 1/4X1 OD FENDER	6 *
14.	76395819	MUD FLAP	2
15.	51716036	HARDWARE KIT	1

* PART OF BODY ASSEMBLY

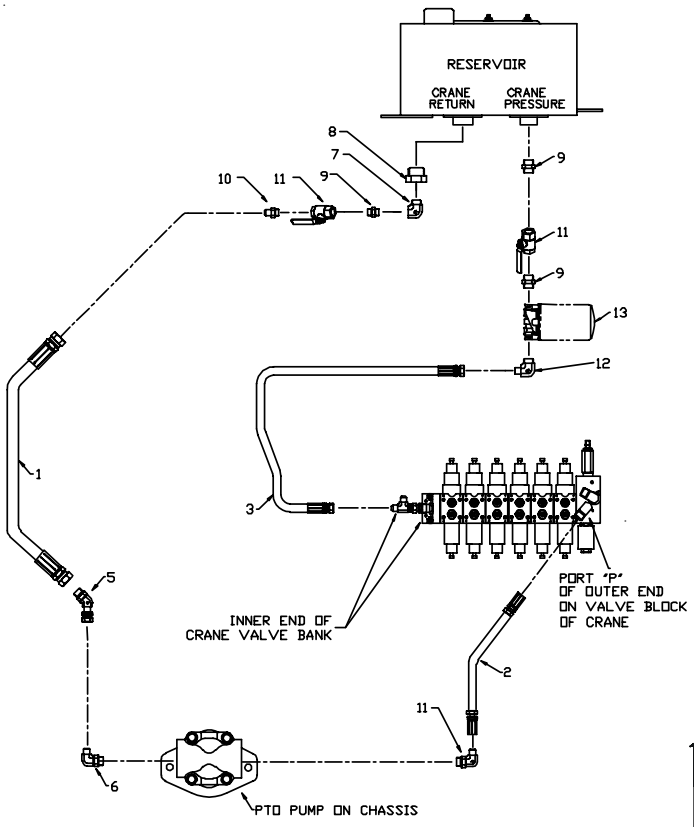


SERIAL NUMBERS PRED991001 TO PRESENT.

MODEL 8511

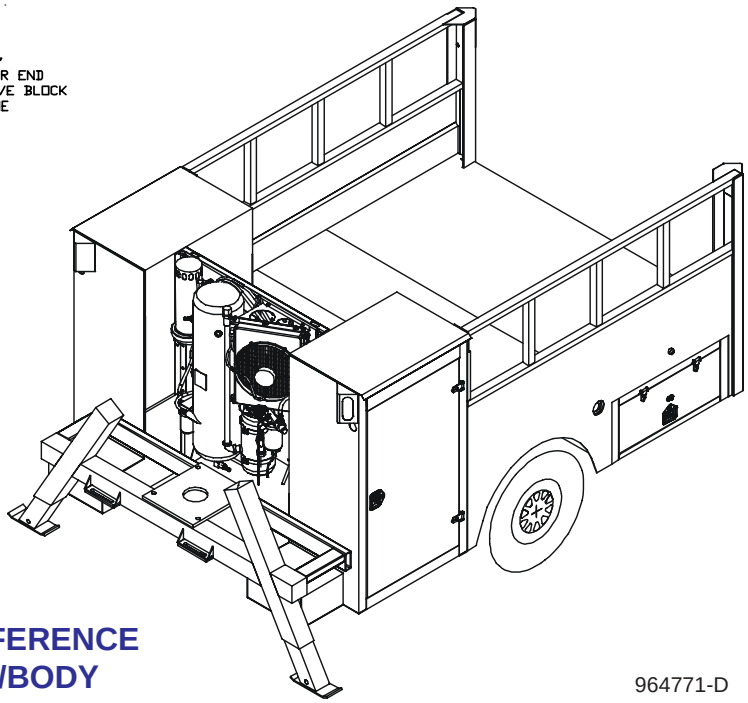
INSTALLATION-BODY/CRANE/FORD SUPER-DUTY (41715869-1) - 8511

1.	975412100	HOSE ASM 3/4X100	1REF
2.	975508096	HOSE ASM 1/2X96	1REF
3.	975408040	HOSE ASM 1/2X40	1REF
5.	72533032	ELBOW #12MJIC #12FJIC 45°	1REF
6.	72053766	ELBOW #10MSTR #12MJIC 90°	1REF
7.	72053556	STREET ELBOW 3/4NPT 90°	1REF
8.	72053376	REDUCER BUSHING 1NPT 3/4NPT	1REF
9.	72053558	ADAPTER 3/4MPT 3/4MPT HEX	3REF
10.	72053676	ADAPTER 3/4MPT #12MJIC	1REF
11.	73054230	BALL VALVE 3/4NPT	2REF
12.	72531422	ELBOW 3/4MPT #8MJIC 90°	1REF
13.	73052000	RETURN FILTER 10MIC 3/4FPT	1REF
14.	72601144	CAP SCR 9/16-12X2 HHGR8	16REF
15.	72062275	NUT 9/16-12 TOP LOCK GR8	16REF
16.	72063117	WASHER 9/16 FLAT HARD	32REF
19.	70143334	EXHAUST CONNECTOR	1REF
20.	72060188	CAP SCR 3/4-10X3-1/2 HHGR5	4REF
21.	72062140	NUT 3/4-10 LOCK STL INSERT	4REF
22.	72063116	WASHER 3/4 FLAT HARD	8REF



INSTALLATION - JANUARY 2000 THROUGH SEPTEMBER 2002.

INSTALLATION - 1999 ONLY.



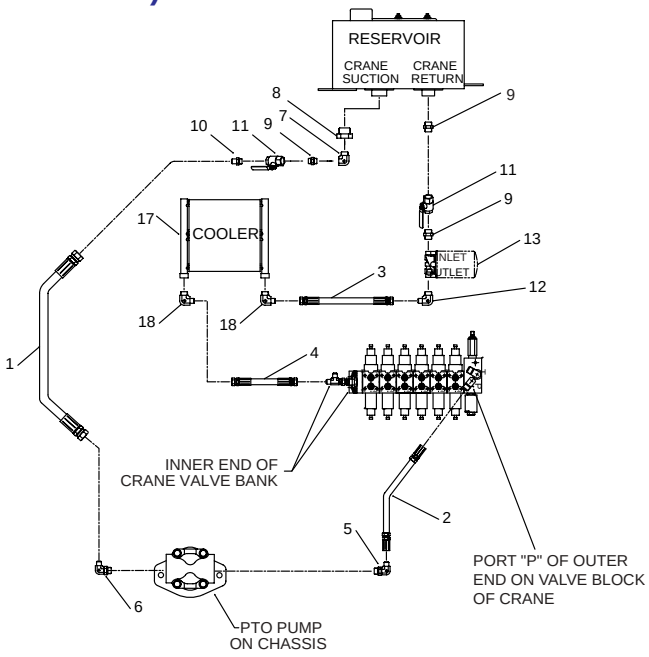
INSTALLATION REFERENCE DWG-CRANE BASE/BODY

964771-D

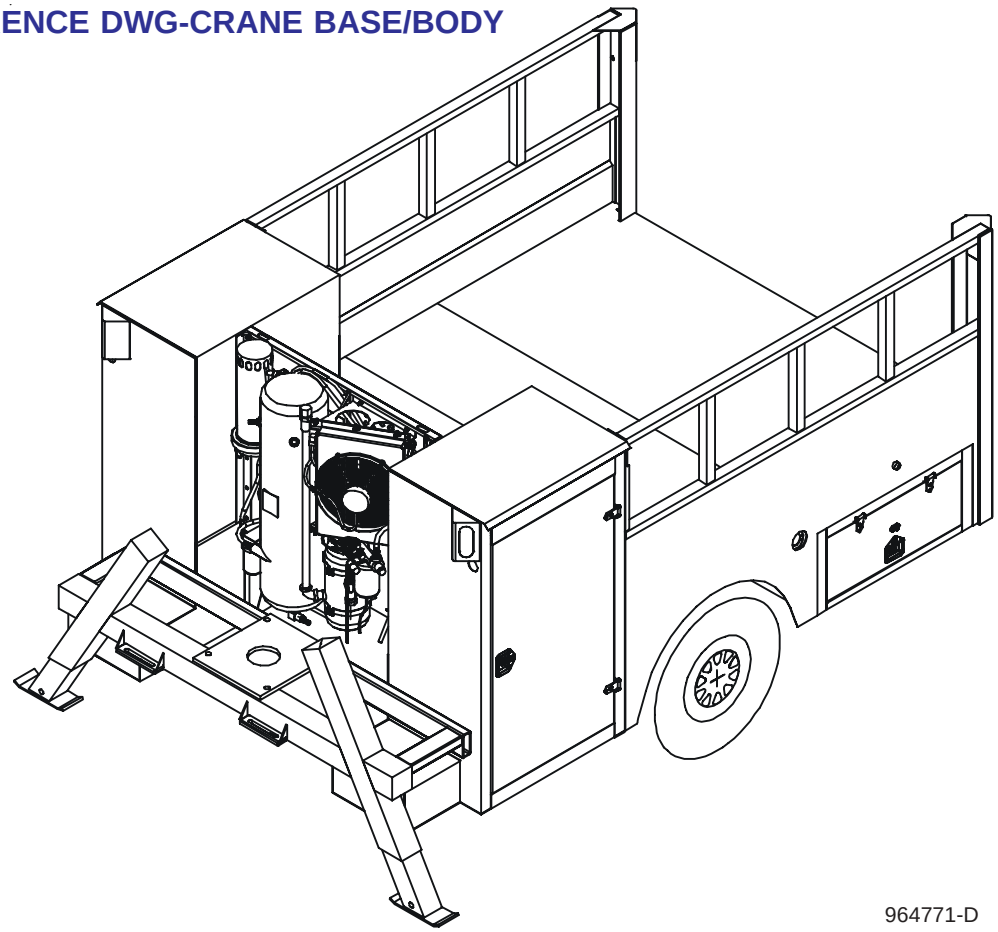
SERIAL NUMBERS PRED991001 TO PRED021073.

INSTALLATION-BODY/FORD SUPER-DUTY (41715869-1)

	MANUAL	AUTOMATIC	DESCRIPTION	QTY
1.	51396296		HOSE ASM 3/4X100	1REF
		51396295	HOSE ASM 3/4 X 48	1REF
	(MANUAL WAS 51712602, AUTO WAS 51394915)			
2.	51395431		HOSE ASM 1/2X98	1REF
		51395404	HOSE ASM 1/2 X 48	1REF
	(MANUAL WAS 51394295, AUTO WAS 51394660)			
3.	51395184	51395184	HOSE ASM 1/2X41	1REF
	(WAS 51395063)			
4.	51394716	51394716	HOSE ASM 1/2X18	1REF
	(WAS 72053764)			
5.	72053764	72053764	ELBOW #10MSTR #8MJIC 90°	1REF
	(WAS 72533032)			1REF
6.	72053767		ELBOW #10MSTR #12MJIC 90°	1REF
		72053766	ELBOW #12MSTR #12MJIC 90°	1REF
7.	72053556	72053556	STREET ELBOW 3/4NPT 90°	1REF
8.	72053376	72053376	RED BUSHING 1NPT 3/4NPT	1REF
9.	72053558	72053558	ADPT 3/4MPT 3/4MPT HEX	3REF
10.	72053676	72053676	ADAPTER 3/4MPT #12MJIC	1REF
11.	73054230	73054230	BALL VALVE 3/4NPT	2REF
12.	72531422	72531422	ELBOW 3/4MPT #8MJIC 90°	1REF
13.	73052000	73052000	RETURN FILTER 10MIC 3/4FPT	1REF
14.	72601144	72601144	CAP SCR 9/16-12X2 HHGR8	16REF
15.	72062275	72062275	NUT 9/16-12 TOP LOCK GR8	16REF
16.	72063117	72063117	WASHER 9/16 FLAT HARD	32REF
17.	70143144	70143144	OIL COOLER	1REF
18.	72534380	72534380	ELBOW 1" MPT #8MJIC 90°	2REF
19.	70143334	70143334	EXHAUST CONNECTOR	1REF
20.	72060188	72060188	CAP SCR 3/4-10X3-1/2 HHGR5	4REF
21.	72062140	72062140	NUT 3/4-10 LOCK STL INSERT	4REF
22.	72063116	72063116	WASHER 3/4 FLAT HARD	8REF



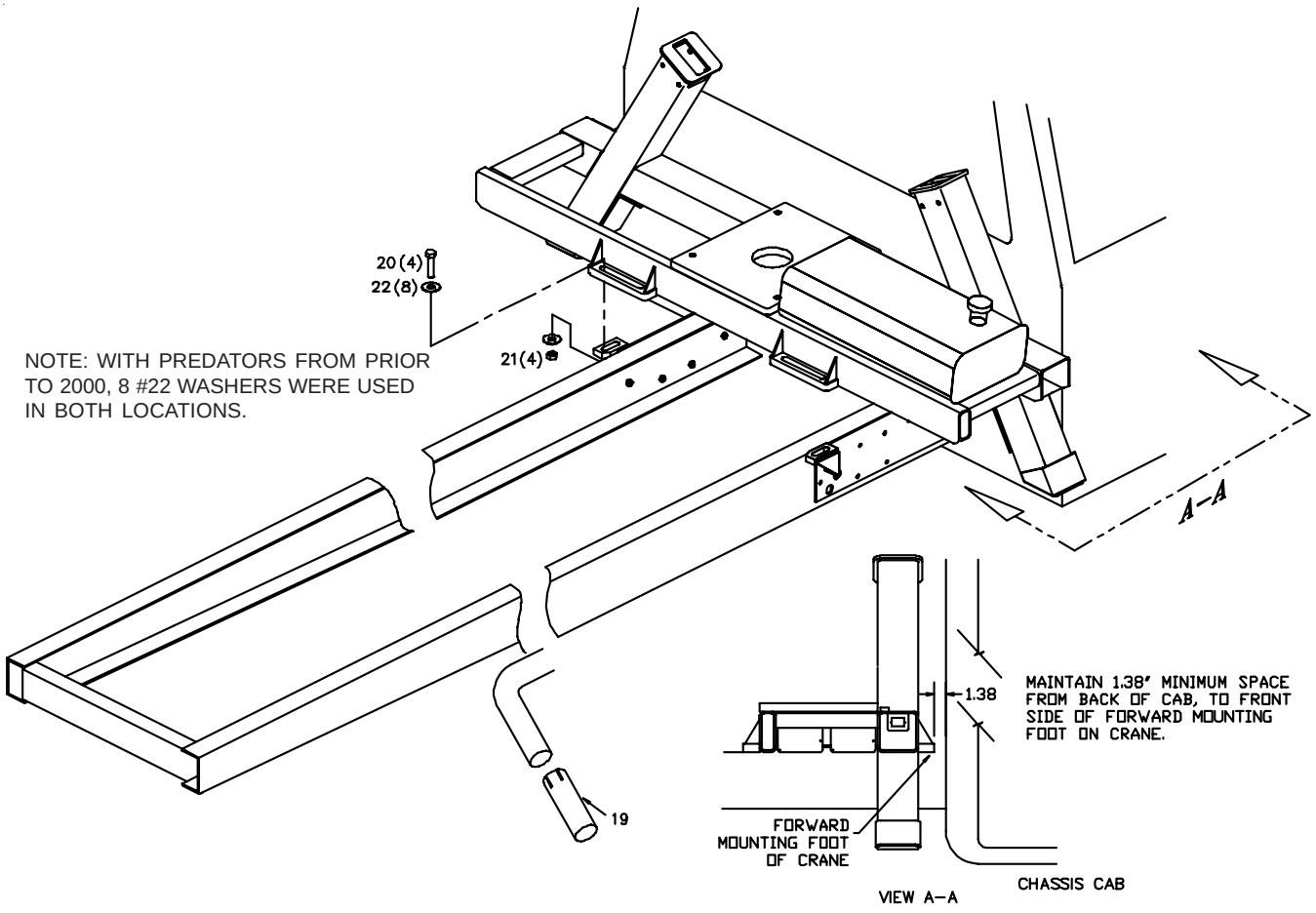
INSTALLATION REFERENCE DWG-CRANE BASE/BODY



964771-D

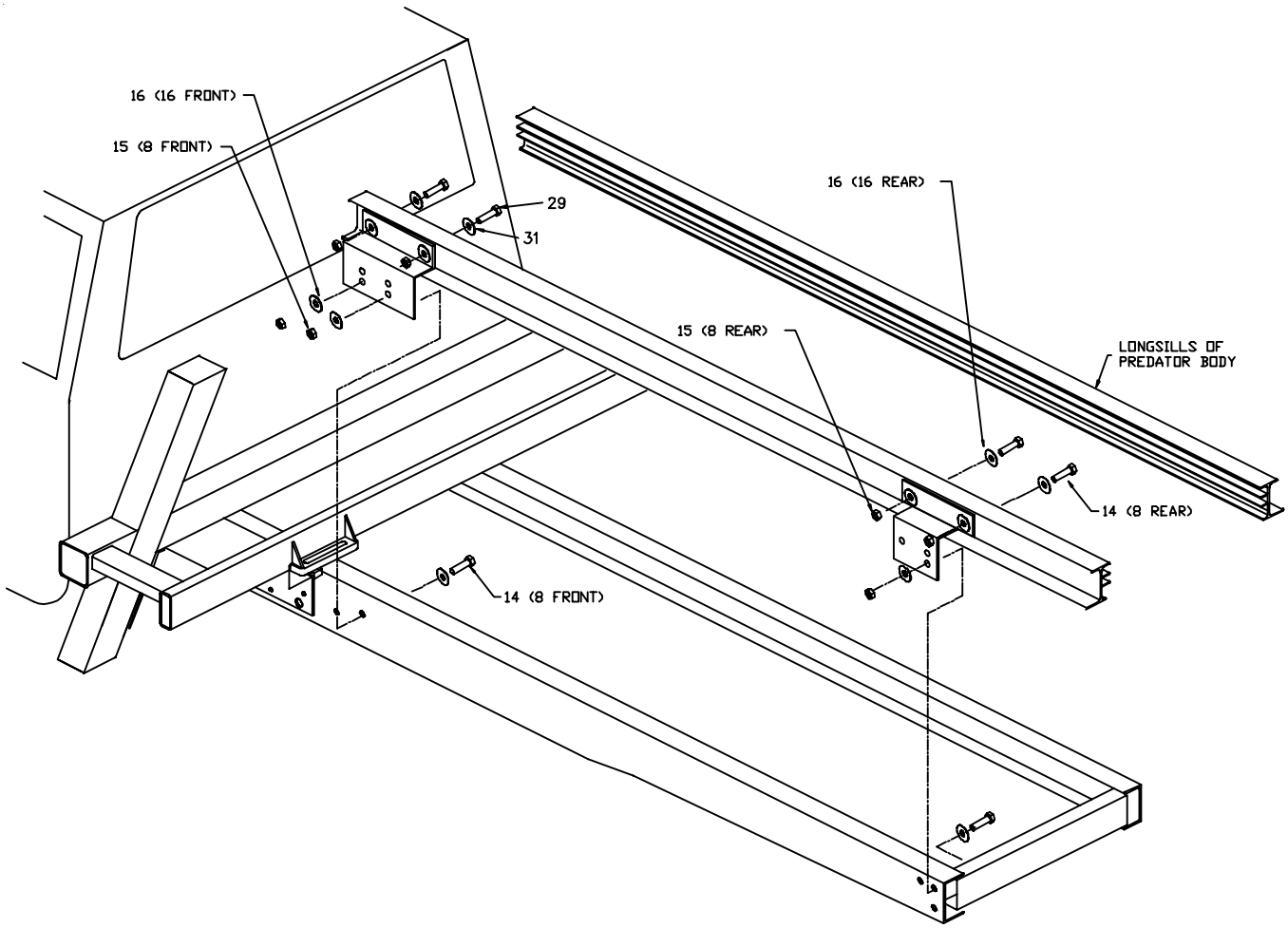
SERIAL NUMBERS PRED021074 TO PRESENT.

INSTALLATION-BODY/CRANE/FORD SUPER-DUTY (41715869-2) -8511



SERIAL NUMBERS PRED991001 TO PRESENT.

INSTALLATION-BODY/CRANE/FORD SUPER-DUTY (41715869-3) - 8511



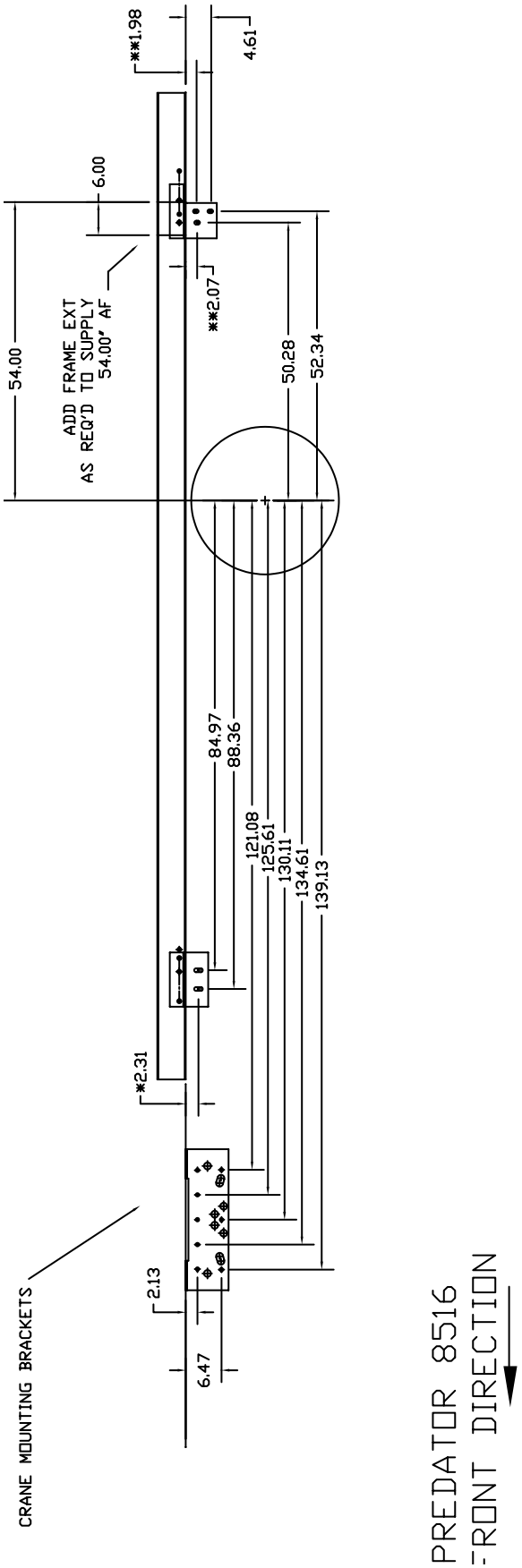
SERIAL NUMBERS PRED991001 TO PRESENT.

INSTALLATION KIT-PREDATOR 8516/FORD SUPER-DUTY (99904044)

FOR FORD SUPERDUTY ONLY:

- LENGTHEN FRAME OF CHASSIS BY ADDING TWO 60130200 FRAME EXTENSION PIECES.
- INSTALL STANDARD SPACER ON TOP OF CHASSIS FRAME IN REAR AFTER FRAME AREA.
- SHIM ENTIRE LENGTH OF CHASSIS FRAME BY ADDING TWO 60130199 SPACERS AND TWO 60117637 SPACERS TO TOP OF CHASSIS FRAME. THIS WILL CREATE A FLAT SURFACE OVER THE CHASSIS FRAME RIVET HEADS.
- SHIMS WILL BE WELDED DOWN ONLY IN THE AREA BEHIND THE REAR SPRING SHACKLE BRACKET. THE SHIMS WILL BE HELD DOWN AHEAD OF THE REAR AXLE USING METAL BANDS (SHIPPING STYLE) OR EQUIVALENT.

* FOR FORD SUPER-DUTY - 0.13" DUE TO SPACER
** FOR FORD SUPER-DUTY - 0.38" DUE TO SPACERS



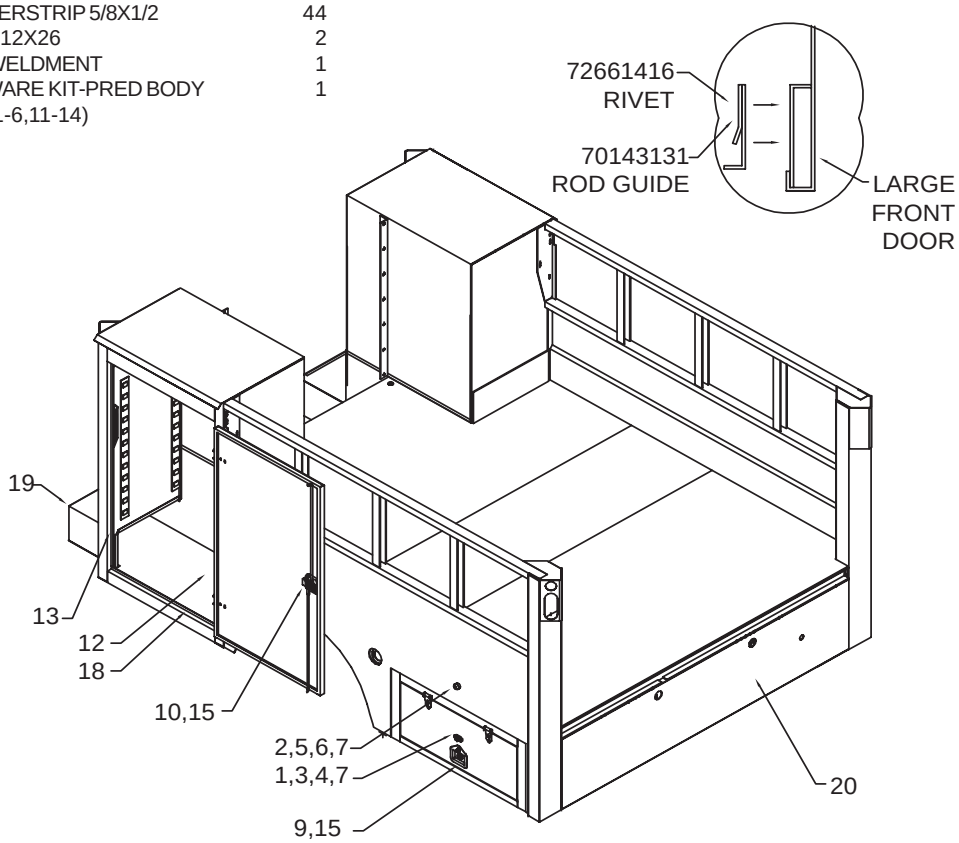
MODEL 8511

BODY ASM-W/CRANE (REF 51715371) - 8511

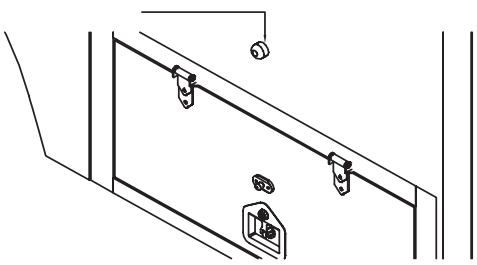
1.	72601008	STOVE BOLT #10-24X1-1/2 FLH SST	8
2.	72601593	CAP SCR 1/4-20X1-1/2 FLH SS	4
3.	72062123	NUT #10-24 LOCK SS	8
4.	72063181	WASHER #10 WRT SS	8
5.	72062194	NUT 1/4-20 LOCK SS	4
6.	72063166	WASHER 1/4-5/8 OD WRT SS	4
7.	72661639	PLUNGER (WAS 72066376)	4
	72661640	SOCKET (PART OF 7)	4REF
8.	41715741	ELECTRICAL INSTALLATION KIT	1
9.	60131214	ROD-DOOR 16 LG 3/4 OFFSET (WAS 60120400)	4
10.	60131215	ROD-DOOR 26.25 LG W-.75in OFFSET (WAS 60122078)	4
11.	70029119	SERIAL NUMBER PLACARD	1
12.	70034366	PLUG 1-1/8	8
13.	70393719	PLUG .266	8
14.	72066340	RIVET POP 1/8X3/8GRIP	2
15.	72661599	LATCH ASM 3PT COMPRESSION (WAS 72661510(2); 72661512(2); AND 76393253(4))	4
18.	89393607	WEATHERSTRIP 5/8X1/2	44
19.	60350058	TREAD 12X26	2
20.	52715372	BODY WELDMENT	1
21.	51716037	HARDWARE KIT-PRED BODY (INCL. 1-6,11-14)	1

NOTE

Please check serial numberof Predator prior to calling for support. Predators produced prior to 5-18-05 include different parts than Predators produced post 5-18-05.



VIEW-LEFT REAR UBTB AFTER SOCKET LOCATION IS DETERMINED. DRILL .266 HOLD THRU SIDE AND KICK PANEL, THEN FROM INSIDE OF BODY DRILL HOLE IN KICK PANEL ONLY TO A SIZE THAT WILL ACCEPT TOOL SOCKET.



SERIAL NUMBERS PRED991001 TO PRESENT.
PARTS LIST CHANGES EFFECTIVE 5/2007.

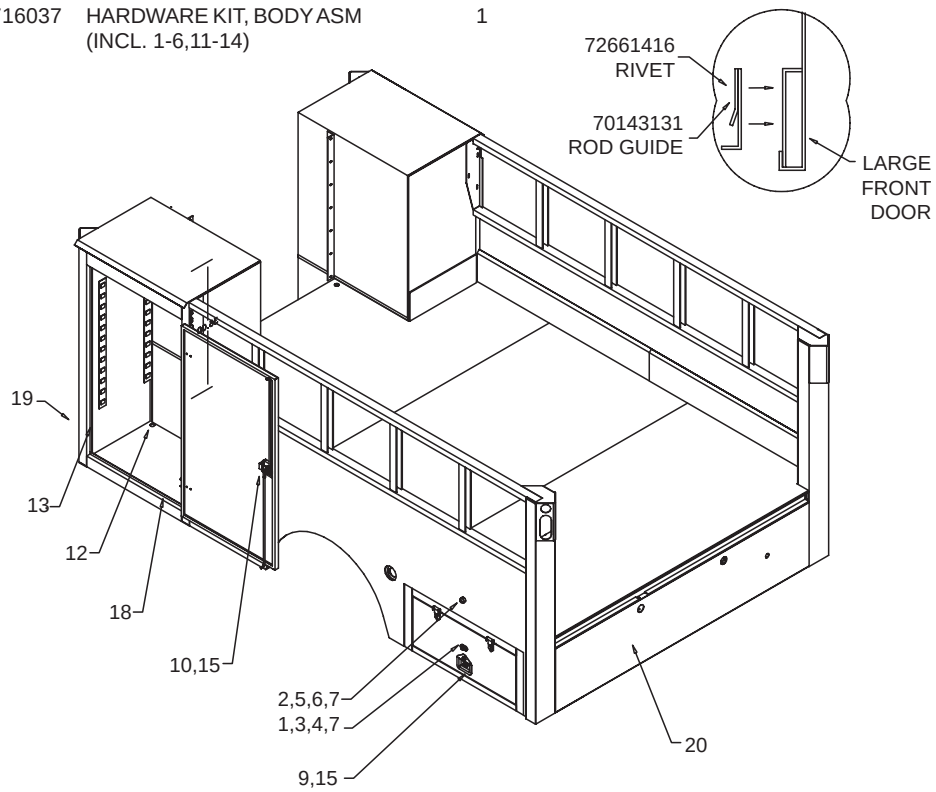
MODEL 8513

BODY ASM-W/O CRANE (REF 51715711) - 8513

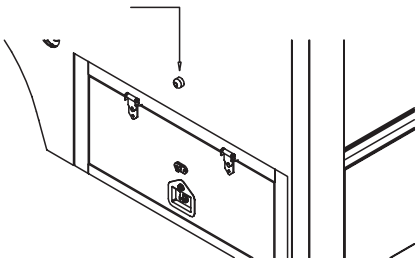
1.	72601008	STOVE BOLT #10-24X1-1/2 FLH SST	8
2.	72601593	CAP SCR 1/4-20X1-1/2 FLH SS	4
3.	72062123	NUT #10-24 LOCK SS	8
4.	72063181	WASHER #10 WRT SS	8
5.	72062194	NUT 1/4-20 LOCK SS	4
6.	72063166	WASHER 1/4-5/8 OD WRT SS	4
7.	72661639	PLUNGER (WAS 72066376)	4
	72661640	SOCKET (PART OF 7)	4REF
8.	41715741	ELECTRICAL INSTALLATION KIT	1
9.	60131214	ROD-DOOR 16 LG 3/4 OFFSET (WAS 60120400)	4
10.	60131215	ROD-DOOR 26.25 LG W-.75in OFFSET (WAS 60122078)	4
11.	70029119	SERIAL NUMBER PLACARD	1
12.	70034366	PLUG 1-1/8	8
13.	70393719	PLUG .266	8
14.	72066340	RIVET POP 1/8X3/8GRIP	2
15.	72661599	LATCH ASM 3PT COMPRESSION (WAS 72661510(2); 72661512(2); AND 76393253(4))	4
18.	89393607	WEATHERSTRIP 5/8X1/2	44
19.	60350058	TREAD 12X26	2
20.	52715712	BODY WELDMENT	1
21.	51716037	HARDWARE KIT, BODY ASM (INCL. 1-6,11-14)	1

NOTE

Please check serial numberof Predator prior to calling for support. Predators produced prior to 5-18-05 include different parts than Predators produced post 5-18-05.



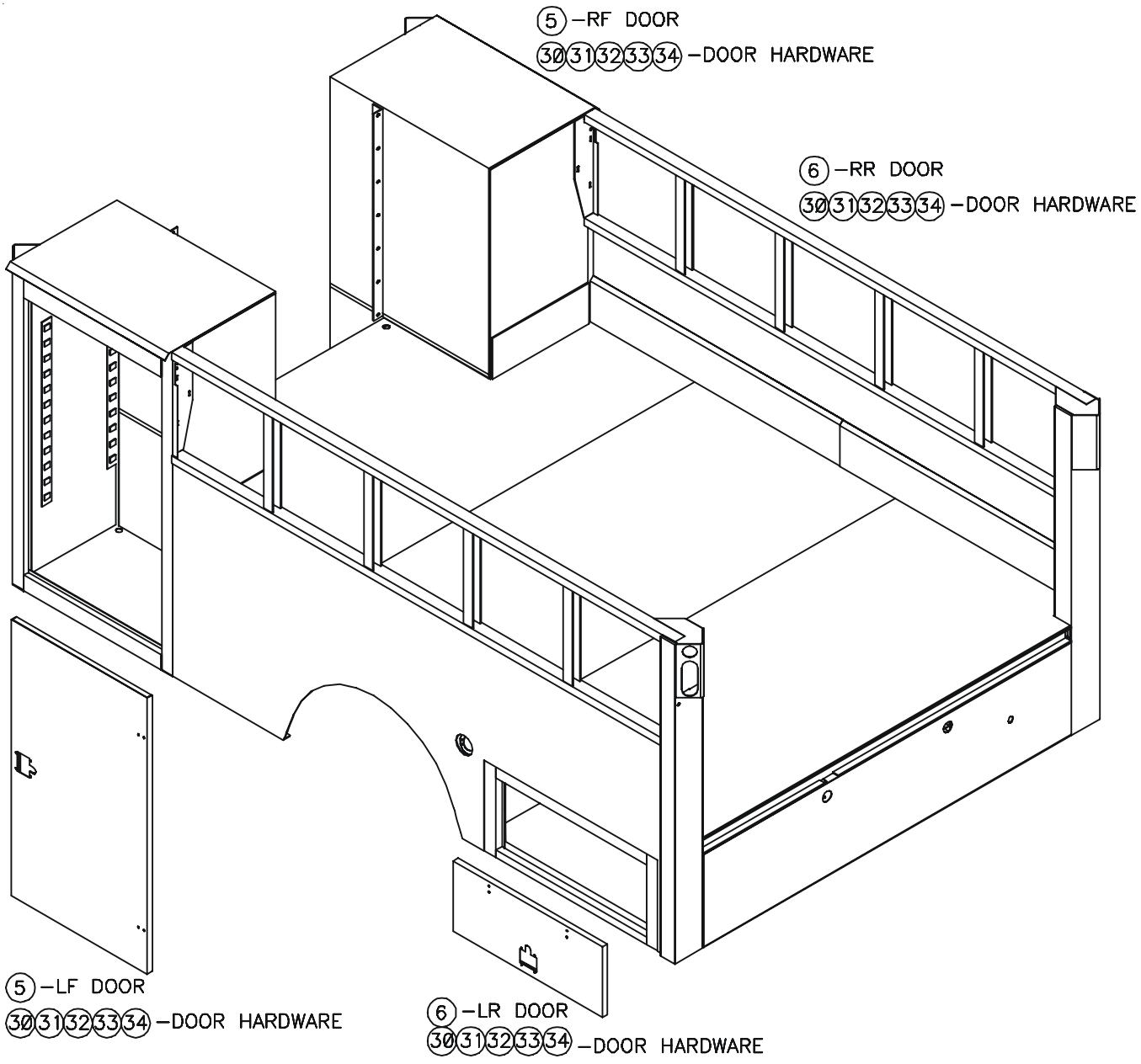
VIEW-LEFT REAR UBTB AFTER SOCKET LOCATION IS DETERMINED. DRILL .266 HOLD THRU SIDE AND KICK PANEL, THEN FROM INSIDE OF BODY DRILL HOLE IN KICK PANEL ONLY TO A SIZE THAT WILL ACCEPT TOOL SOCKET.



SERIAL NUMBERS PRED991001 TO PRESENT.
PARTS LIST CHANGES EFFECTIVE 5/2007.

COMPARTMENT DOORS (52715712)

5.	52717859	DOOR WLDMT 53.88X30.50	2
6.	52715718	DOOR-WLDMT 13.75X33.50	2
30.	72062194	NUT 1/4-20 LOCK SS	24
31.	72062264	NUT 1/4-20 WELD	16
32.	72063166	WASHER 1/4 WRT SS	16
33.	72601652	MACH SCR 1/4-20X3/4 TRHTORXSS	32
34.	72661383	HINGE-SS	8



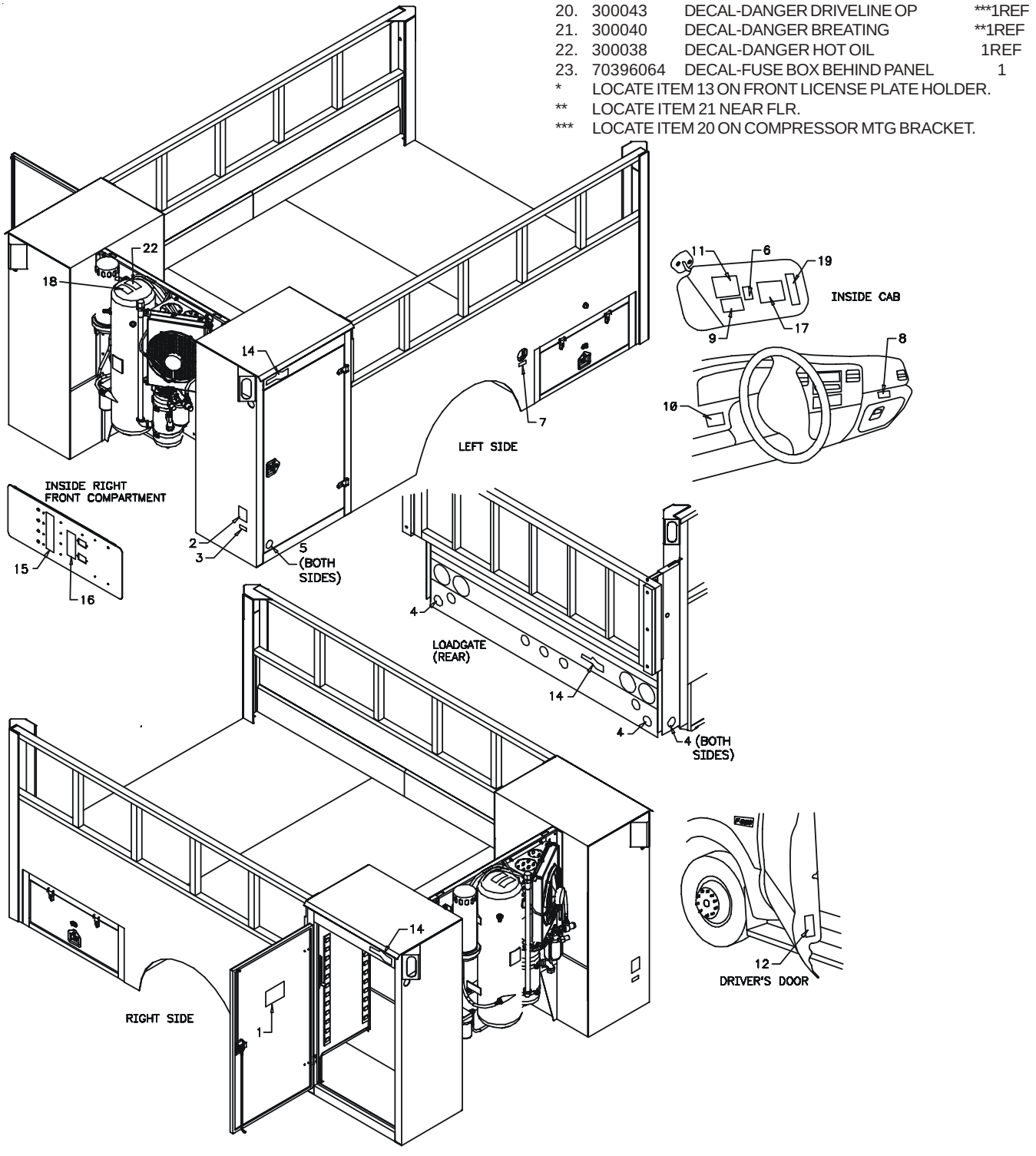
SERIAL NUMBERS PRED991001 TO PRESENT.

MODEL 8513

DECAL KIT (51715853) - 8513 (THRU PRED021073)

1.	70395651	DECAL-PM KIT VP6160C	1
2.	71393886	DECAL-DANGER EXPLODING TANK	1
3.	70391601	DECAL-AIR TANK DRAIN	1
4.	70039057	REFLECTOR-RED	4
5.	70039058	REFLECTOR-AMBER	2
6.	70392213	DECAL-CAUTION WASH/WAX	1
7.	70392309	DECAL-DIESEL FUEL ONLY	1
8.	70392965	DECAL-THINK SAFETY	1
9.	70392982	DECAL-SERV & REPAIR	1
10.	70394092	DECAL-CAUTION BRK/COMP	1
11.	71039134	DECAL-CAUTION OIL LEVEL	1
12.	70392387	DECAL-FINAL STG VEH CERT	1
13.	70393309	LICENSE PLATE-IMT DIAMOND	*1
14.	70395654	DECAL-PREDATOR ID	3
15.	70395656	DECAL-PREDATOR LIGHTS	1
16.	70395657	DECAL-PREDATOR TRK/COMP	1
17.	301476	DECAL-CMPRSR START UP	1REF
18.	301475	DECAL-CMPRSR FLUID	1REF
19.	301474	DECAL-WARNING READ MANUAL	1REF
20.	300043	DECAL-DANGER DRIVELINE OP	***1REF
21.	300040	DECAL-DANGER BREATING	**1REF
22.	300038	DECAL-DANGER HOT OIL	1REF
23.	70396064	DECAL-FUSE BOX BEHIND PANEL	1

* LOCATE ITEM 13 ON FRONT LICENSE PLATE HOLDER.
** LOCATE ITEM 21 NEAR FLR.
*** LOCATE ITEM 20 ON COMPRESSOR MTG BRACKET.

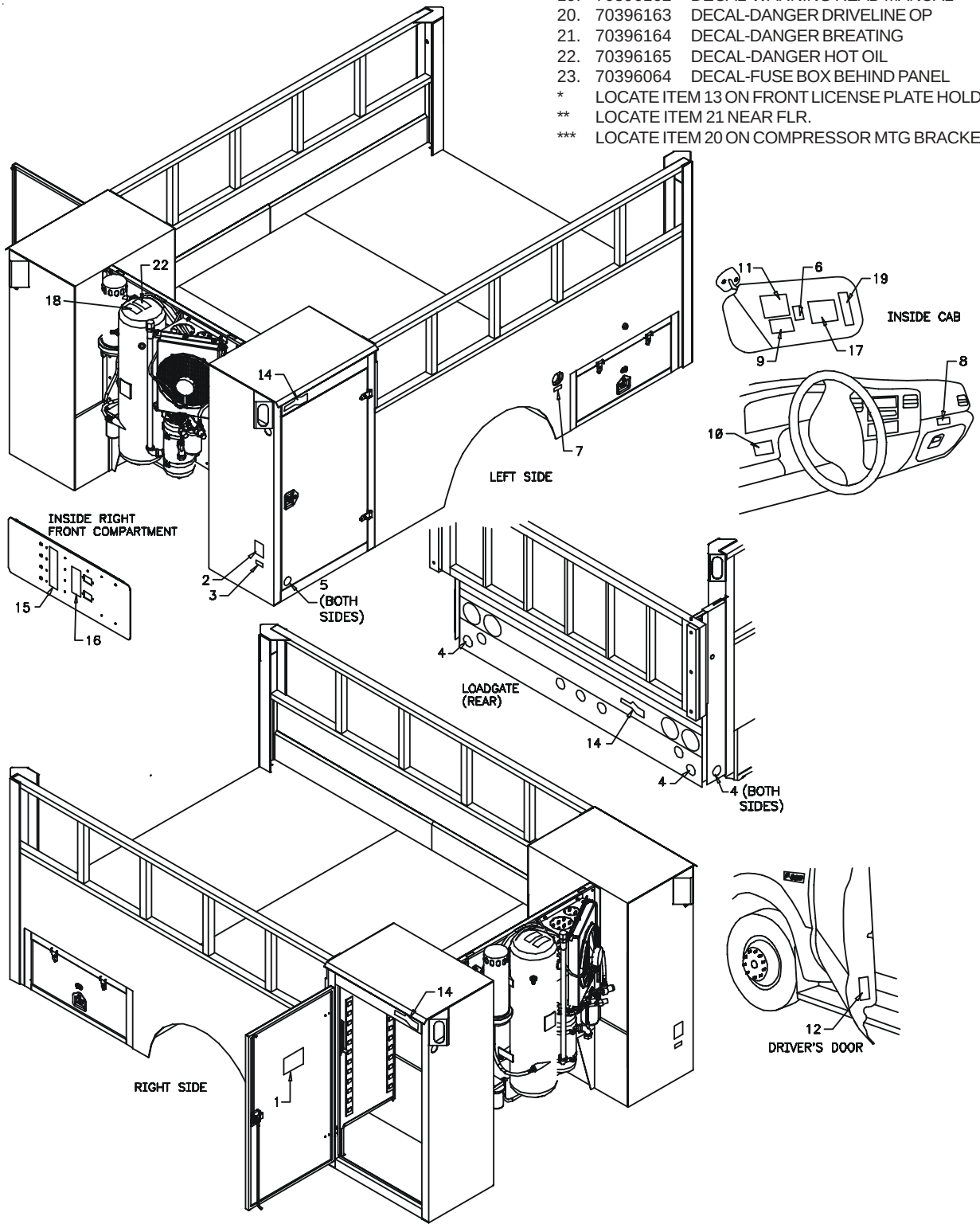


SERIAL NUMBERS PRED991001 TO PRED021073.

DECAL KIT (51715853) - 8513 (PRED021074 ON)

1.	70396709	DECAL-PM KIT PREDATOR	1
2.	71393886	DECAL-DANGER EXPLODING TANK	1
3.	70391601	DECAL-AIR TANK DRAIN	1
4.	70039057	REFLECTOR-RED	4
5.	70039058	REFLECTOR-AMBER	2
6.	70392213	DECAL-CAUTION WASH/WAX	1
7.	70392309	DECAL-DIESEL FUEL ONLY	1
8.	70392965	DECAL-THINK SAFETY	1
9.	70392982	DECAL-SERV & REPAIR	1
10.	70394092	DECAL-CAUTION BRK/COMP	1
11.	71039134	DECAL-CAUTION OIL LEVEL	1
12.	70392387	DECAL-FINAL STG VEH CERT	1
13.	70393309	LICENSE PLATE-IMT DIAMOND	*1
14.	70395654	DECAL-PREDATOR ID	3
15.	70395656	DECAL-PREDATOR LIGHTS	1
16.	70395657	DECAL-PREDATOR TRK/COMP	1
17.	70396160	DECAL-CMPRSR START UP	1REF
18.	70396161	DECAL-CMPRSR FLUID	1REF
19.	70396162	DECAL-WARNING READ MANUAL	1REF
20.	70396163	DECAL-DANGER DRIVELINE OP	***1REF
21.	70396164	DECAL-DANGER BREATING	**1REF
22.	70396165	DECAL-DANGER HOT OIL	1REF
23.	70396064	DECAL-FUSE BOX BEHIND PANEL	1

* LOCATE ITEM 13 ON FRONT LICENSE PLATE HOLDER.
** LOCATE ITEM 21 NEAR FLR.
*** LOCATE ITEM 20 ON COMPRESSOR MTG BRACKET.



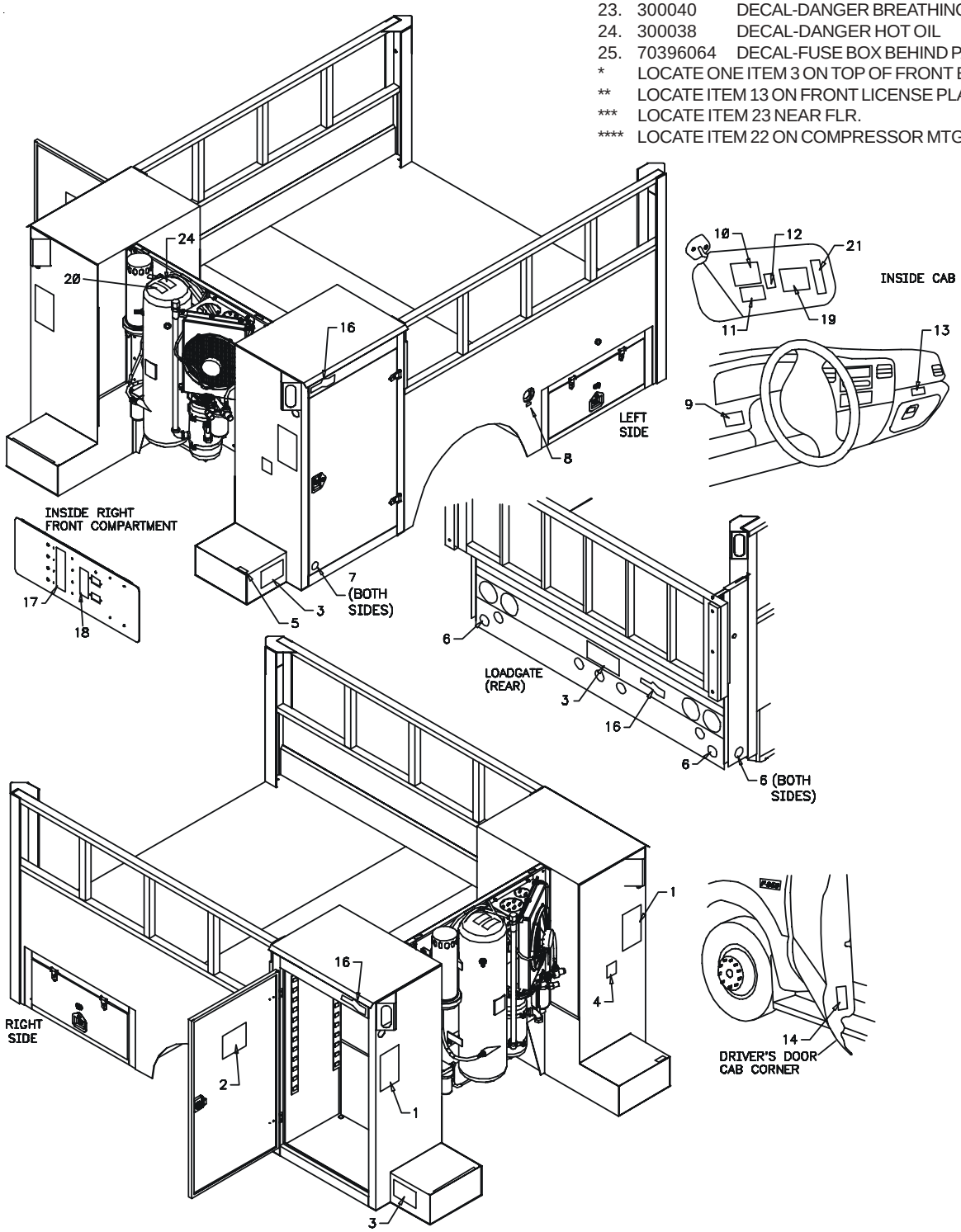
SERIAL NUMBERS PRED021074 TO PRESENT.

MODEL 8511

DECAL KIT (51715852) - 8511 (THRU PRED021073)

1.	71393863	CAPACITY CHART-3000	2
2.	70395652	DECAL-PM KIT VP6160D	1
3.	70392865	DECAL-DGR ELEC HZD (PART OF CRANE)	*4REF
4.	71393886	DECAL-DANGER EXPLODING TANK	1
5.	70391601	DECAL-AIR TANK DRAIN	1
6.	70039057	REFLECTOR-RED	4
7.	70039058	REFLECTOR-AMBER	2
8.	70392309	DECAL-DIESEL FUEL ONLY	1
9.	70394092	DECAL-CAUTION BRK/COMP	1
10.	71039134	DECAL-CAUTION OIL LEVEL	1
11.	70392982	DECAL-SERV & REPAIR	1
12.	70392213	DECAL-CAUTION WASH/WAX	1
13.	70392965	DECAL-THINK SAFETY	1
14.	70392387	DECAL-FINAL STG VEH CERT	1
15.	70393309	LICENSE PLATE-IMT DIAMOND	**1
16.	70395654	DECAL-PREDATOR ID	3
17.	70395656	DECAL-PREDATOR LIGHTS	1
18.	70395657	DECAL-PREDATOR TRK/COMP	1
19.	301476	DECAL-CMPRSR START UP	1REF
20.	301475	DECAL-CMPRSR FLUID	1REF
21.	301474	DECAL-WARNING READ MANUAL	1REF
22.	300043	DECAL-DANGER DRIVELINE OP	****1REF
23.	300040	DECAL-DANGER BREATHING	***1REF
24.	300038	DECAL-DANGER HOT OIL	1REF
25.	70396064	DECAL-FUSE BOX BEHIND PANEL	1

* LOCATE ONE ITEM 3 ON TOP OF FRONT BUMPER.
** LOCATE ITEM 13 ON FRONT LICENSE PLATE HOLDER.
*** LOCATE ITEM 23 NEAR FLR.
**** LOCATE ITEM 22 ON COMPRESSOR MTG BRACKET.

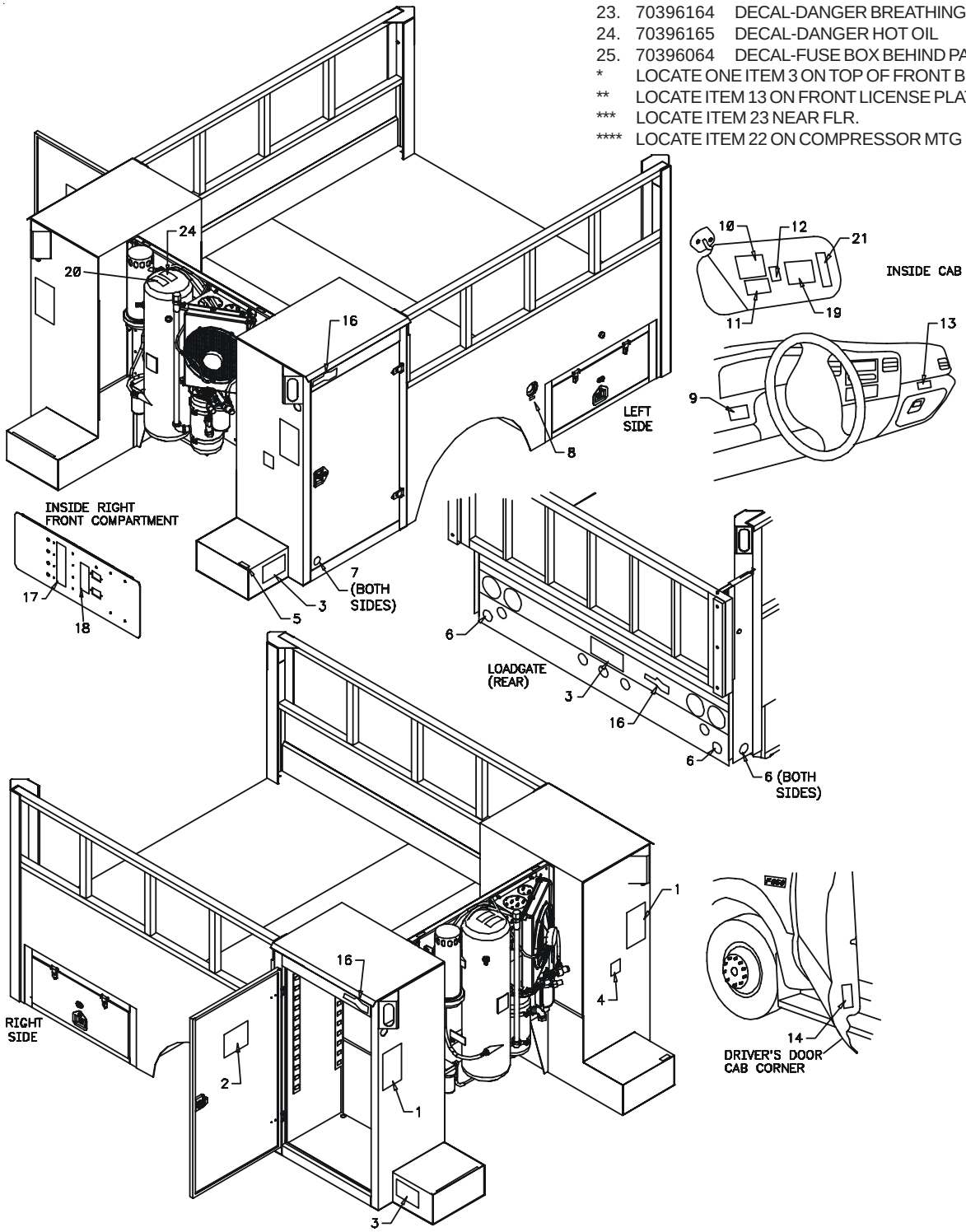


SERIAL NUMBERS PRED991001 TO PRED021073.

DECAL KIT (51715852) - 8511 (PRED021074 ON)

1.	71393863	CAPACITY CHART-3000	2
2.	70396709	DECAL-PM KIT PREDATOR	1
3.	70392865	DECAL-DGR ELEC HZD (PART OF CRANE)	*4REF
4.	71393886	DECAL-DANGER EXPLODING TANK	1
5.	70391601	DECAL-AIR TANK DRAIN	1
6.	70039057	REFLECTOR-RED	4
7.	70039058	REFLECTOR-AMBER	2
8.	70392309	DECAL-DIESEL FUEL ONLY	1
9.	70394092	DECAL-CAUTION BRK/COMP	1
10.	71039134	DECAL-CAUTION OIL LEVEL	1
11.	70392982	DECAL-SERV & REPAIR	1
12.	70392213	DECAL-CAUTION WASH/WAX	1
13.	70392965	DECAL-THINK SAFETY	1
14.	70392387	DECAL-FINAL STG VEH CERT	1
15.	70393309	LICENSE PLATE-IMT DIAMOND	**1
16.	70395654	DECAL-PREDATOR ID	3
17.	70395656	DECAL-PREDATOR LIGHTS	1
18.	70395657	DECAL-PREDATOR TRK/COMP	1
19.	70396160	DECAL-CMPRSR START UP	1REF
20.	70396161	DECAL-CMPRSR FLUID	1REF
21.	70396162	DECAL-WARNING READ MANUAL	1REF
22.	70396163	DECAL-DANGER DRIVELINE OP	****1REF
23.	70396164	DECAL-DANGER BREATHING	***1REF
24.	70396165	DECAL-DANGER HOT OIL	1REF
25.	70396064	DECAL-FUSE BOX BEHIND PANEL	1

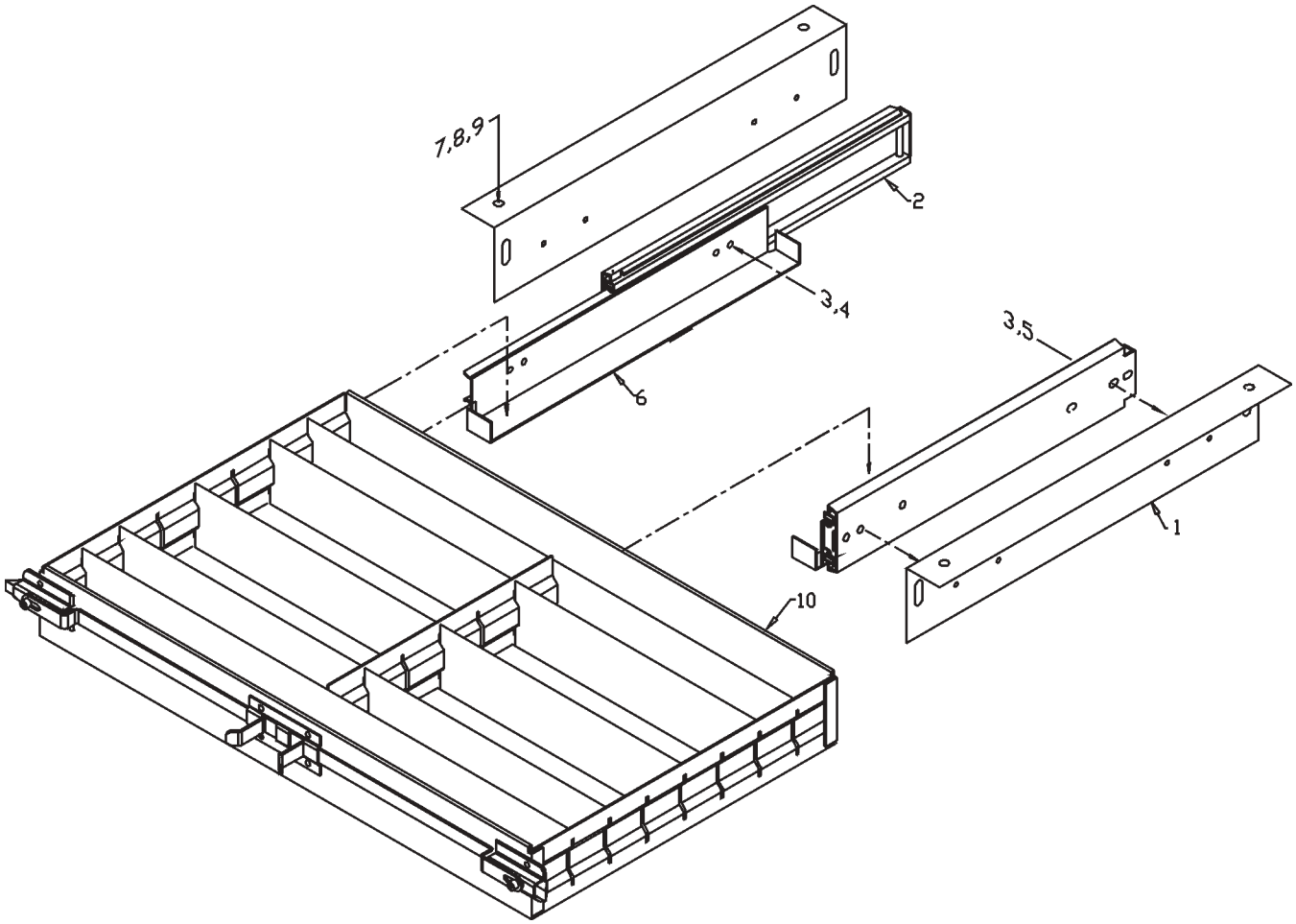
* LOCATE ONE ITEM 3 ON TOP OF FRONT BUMPER.
** LOCATE ITEM 13 ON FRONT LICENSE PLATE HOLDER.
*** LOCATE ITEM 23 NEAR FLR.
**** LOCATE ITEM 22 ON COMPRESSOR MTG BRACKET.



SERIAL NUMBERS PRED021074 TO PRESENT.

DRAWER ASM 3H X 26W X 16D SGL PULL (51716628) (THRU PRED021073)

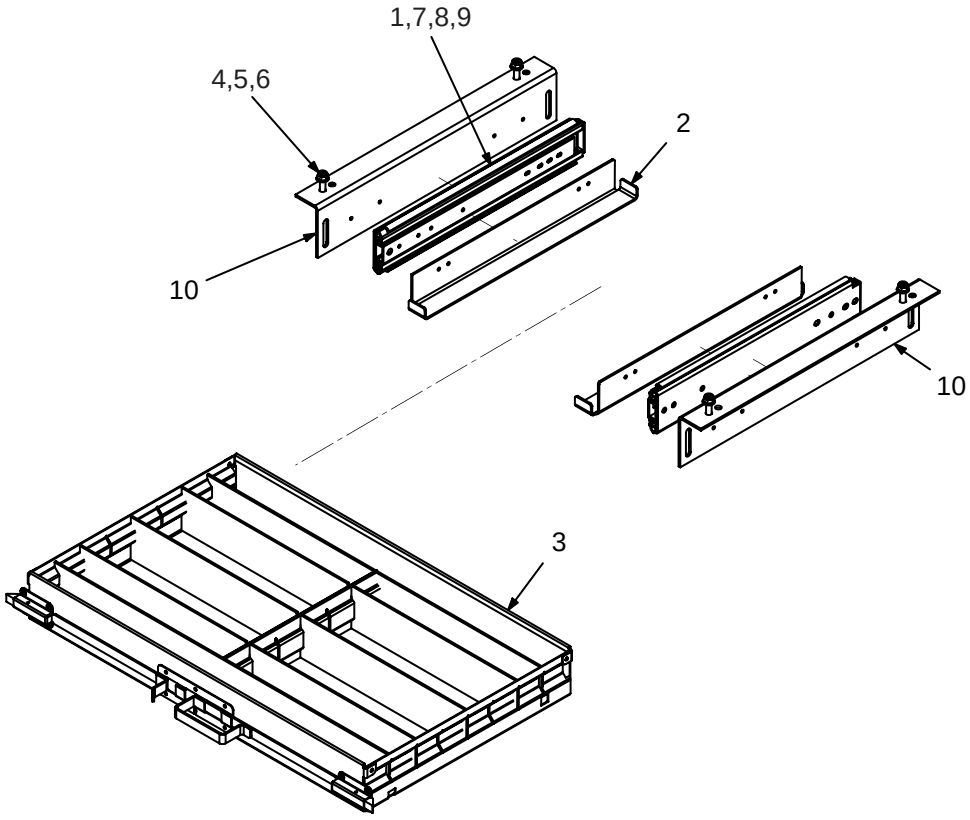
1.	60122288	BRACKET	2
2.	70731440	DRAWER SLIDE 16”	2
3.	72062106	NUT #10-24 LOCK	16
4.	72601283	MACH SCR #10-24X1/2 PH SLT	8
5.	72601284	MACH SCR #10-24X5/8 FH SLT	8
6.	60119271	BRACKET	2
7.	72060025	CAP SCR 5/16-18X1 HHGR5	4
8.	72063002	WASHER 5/16 WRT	8
9.	72062109	NUT 5/16-18 HEX	4
10.	70733466	DRAWER W/DIVIDERS	1



SERIAL NUMBERS PRED991001 TO PRED021073.

DRAWER ASM 1-3” H X 26” W X 16” D SGL PULL (51715842)

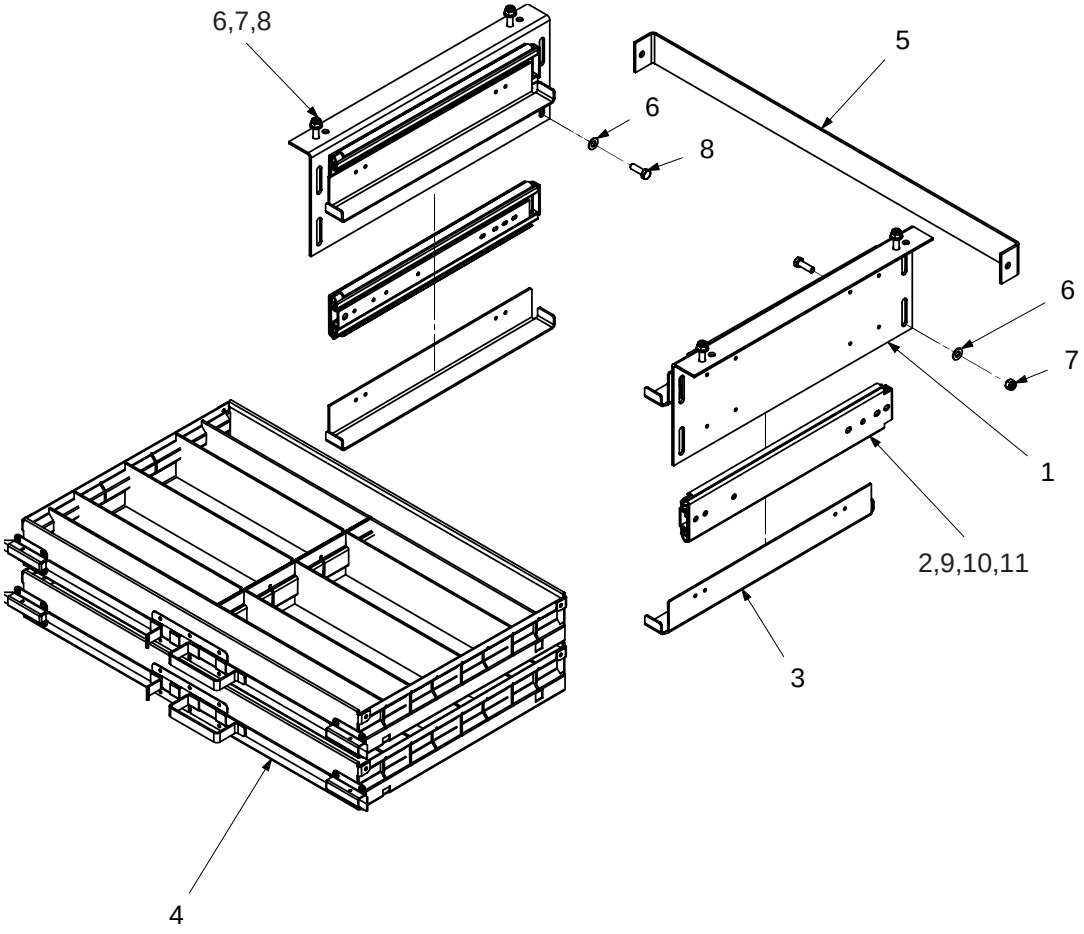
1.	70731440	DRAWER SLIDE 16”	2
2.	60119271	BRACKET	2
3.	70734320	DRAWER W/DIV 3” X 16” X 26” (WAS 70733798) (UNPAINTED - 70733414 - REFERENCE FOR SERVICE)	1
4.	72063002	WASHER 5/16 WRT	8
5.	72062109	NUT 0.31-18 HEX NYLOC	4
6.	72060025	CAP SCR 5/16-18X1 HHGR5	4
7.	72062106	NUT #10-24 LOCK	32
8.	72601283	MACH SCR #10-24X1/2 PH SLT	16
9.	72601284	MACH SCR #10-24X5/8 FH SLT	16
10.	60119271	BRACKET	2



SERIAL NUMBERS PRED021074 TO PRESENT.

DRAWER ASM 2-3” H X 26” W X 16” D SGL PULL (51715864)

1.	60112288	BRACKET	2
2.	70731440	DRAWER SLIDE 16” - PAINTED	4
3.	60119271	BRACKET	4
4.	70734320	DRAWER W/DIVIDERS - PAINTED	2
	(WAS 70733798)		
	(REFERENCE FOR SERVICE - UNPAINTED - 70733414)		
5.	60131205	BRACKET	1
6.	72063002	WASHER 5/16 WRT	12
7.	72062109	NUT 0.31-18 HEX NYLOC	6
8.	72060025	CAP SCR 5/16-18X1 HHGR5	6
9.	72062106	NUT #10-24 LOCK	32
10.	72601283	MACH SCR #10-24X1/2 PH SLT	16
11.	72601284	MACH SCR #10-24X5/8 FH SLT	16



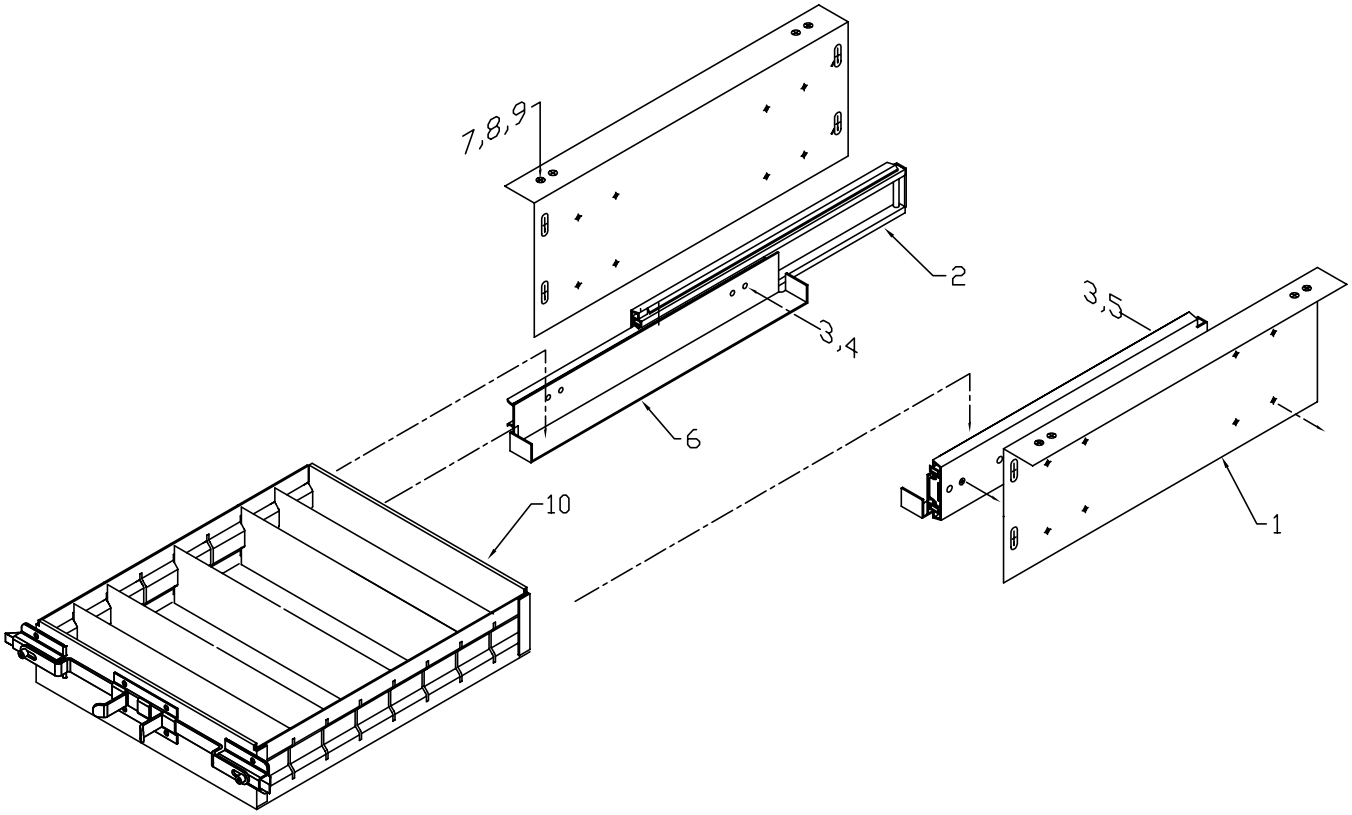
SERIAL NUMBERS PRED021074 TO PRESENT.

DRAWER ASM 2-3” H X 13” W X 16” D SGL PULL (51716628)

1.	60122288	BRACKET	2
2.	70731440	DRAWER SLIDE 16”	4
3.	72062106	NUT #10-24 HEX LOCK	32
4.	72601283	MACH SCR #10-24X1/2 PH SLT	16
5.	72601284	MACH SCR #10-24X5/8 FH SLT	16
6.	60119271	BRACKET	4
7.	72060025	CAP SCR 5/16-18X1 HHGR5	4
8.	72063002	WASHER 5/16 WRT	8
9.	72062109	NUT 5/16-18 HEX	4
10.	70733800	DRAWER W/DIVIDERS - PAINTED	2
	(UNPAINTED - 70733486 - REF, SERVICE)		

NOTE:

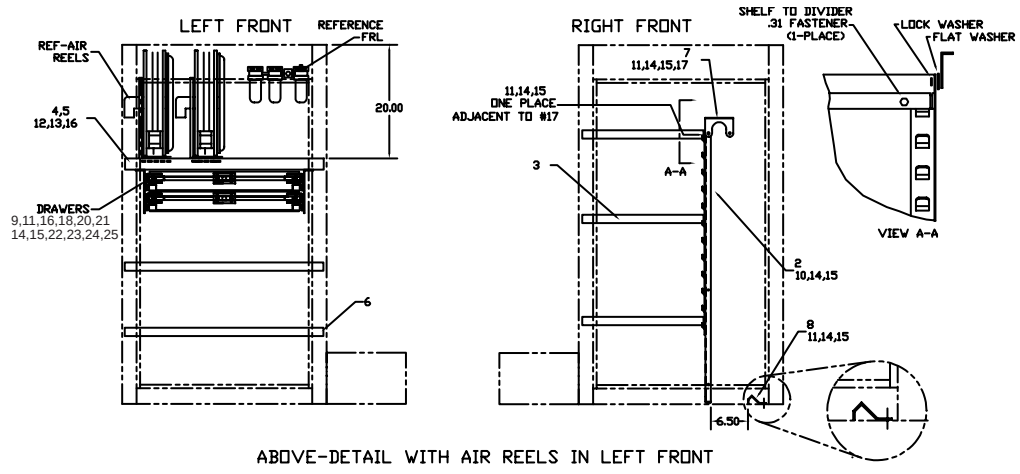
NOT AVAILABLE. REFERENCE FOR SERVICE ONLY.

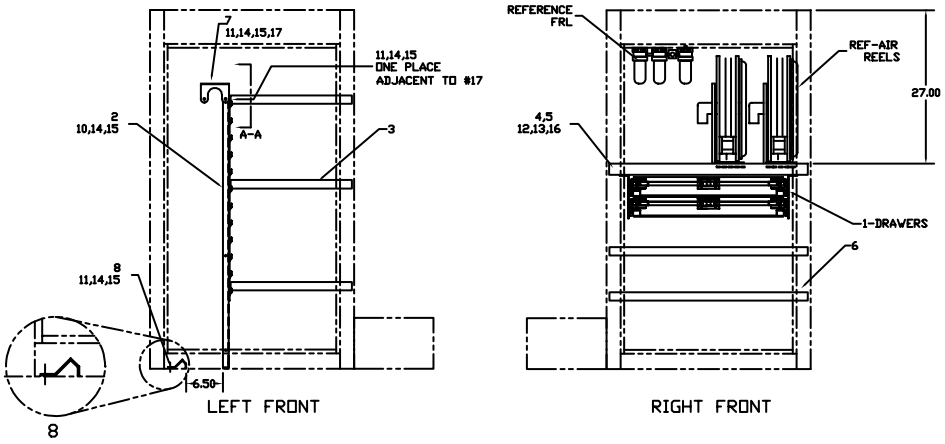


SERIAL NUMBERS PRED021074 TO PRESENT.

SHELF PACKAGE - PREDATOR W/O $CACL_2$ SYSTEM (51715867)

1.	51715864	DRAWER ASM	1
2.	52715818	DIVIDER	1
3.	60121842	ADJUSTABLE SHELF - 17 X 21.38	3
4.	60124755	CHANNEL	1
5.	60122216	ANGLE	2
6.	60122217	ADJ SHELF - 18.75 X 35.25	2
7.	60122241	BRACKET-STOP TIRE CAGE	1
8.	60122242	BRACKET-TIRE CAGE BOTTOM	1
9.	60131205	BRACKET - ROLLOUT DRAWER	1
10.	72060023	CAP SCR 5/16-18X 3/4 HHGR5Z	4REF
11.	72060025	CAP SCR 5/16-18X1.00 HHGR5Z	10REF
12.	72060092	CAP SCR 1/2-13 X 1.25 HHGR5Z	8REF
13.	72062080	NUT 1/2-13 HEX NYLOC	8REF
14.	72062109	NUT 5/16-18 HEX NYLOC	14REF
15.	72063002	WASHER 5/16 FLAT	21REF
16.	72063005	WASHER 1/2 FLAT	16REF
17.	72063050	WASHER 5/16 LOCK	1REF
18.	70733798	DRAWER W/DIVIDERS 3X16X26 PAINT (UNPAINTED - 70733414 - REF, SERVICE)	2
19.	60119271	BRACKET-ROLLOUT DRAWER	4
20.	72601284	SCR-MACH 10-24 X 5/8 FLH SLOT	16REF
21.	72601283	SCR-MACH 10-24 X 1/2 PN SL	16REF
22.	72062106	NUT 10-24 HEX NYLOC	32REF
23.	70731440	DRAWER-SLIDE 16”	4
24.	60122288	BRACKET-ROLLOUT DRAWER	1
25.	60122447	BRACKET-DRAWER	1





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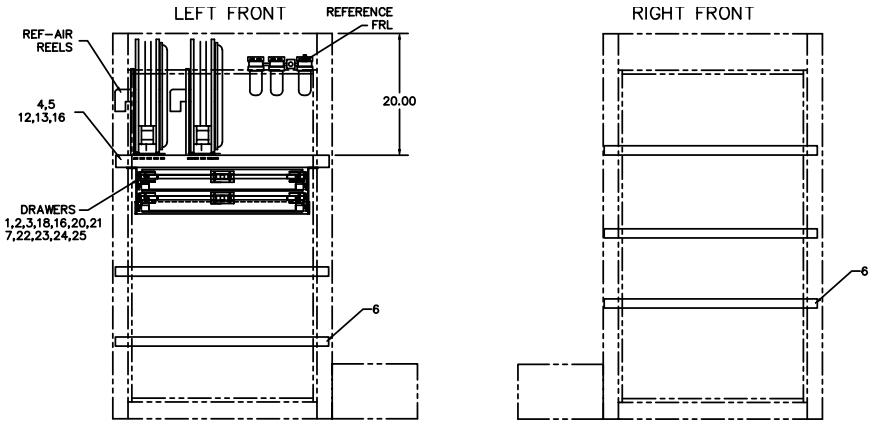
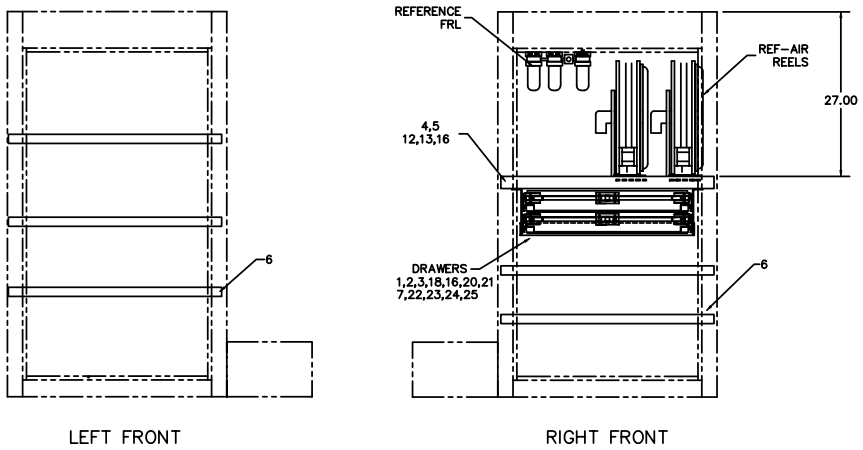
SERIAL NUMBERS PRED021074 TO PRESENT.

SHELF PACKAGE - PREDATOR W/O $CACL_2$ SYSTEM (51717217)

1.	60131205	BRACKET-ROLLOUT DRW SPREADER	1
2.	72060025	CAP SCR 0.31-18 X 1 HHGR5Z	2REF
3.	72063002	WASHER 0.31 FLAT	4REF
4.	60124755	CHANNEL	1
5.	60122216	ANGLE-REEL SHELF	2
6.	60122217	ADJ SHELF - 18.75 X 35.25	5
7.	72062109	NUT 0.31-18 HEX NYLOC	2REF
12.	72060092	CAP SCR 1/2-13 X 1.25 HH GR5Z	8REF
13.	72062080	NUT 1/2-13 HEX NYLOC	8REF
18.	70733414	DRAWER W/DIVIDERS - PAINTED	2
		(WAS 70733798)	
		(UNPAINTED - 70733414 - REF, SERVICE)	
19.	60119271	BRACKET-ROLLOUT DRAWER	4
20.	72601284	SCR-MACH 10-24 X 5/8 FLH SLOT	16REF
21.	72601283	SCR-MACH 10-24 X 1/2 PN SL	16REF
22.	72062106	NUT 10-24 HEX NYLOC	32REF
23.	70731440	DRAWER-SLIDE 16"	4
24.	60122288	BRACKET-ROLLOUT DRAWER	1



ABOVE-DETAIL WITH AIR REELS IN LEFT FRONT
REFERENCE MUST BE MADE TO SALES ORDER NOTES TO DETERMINE ORIENTATION OF AIR REELS
BELOW-DETAIL WITH AIR REELS IN RIGHT FRONT

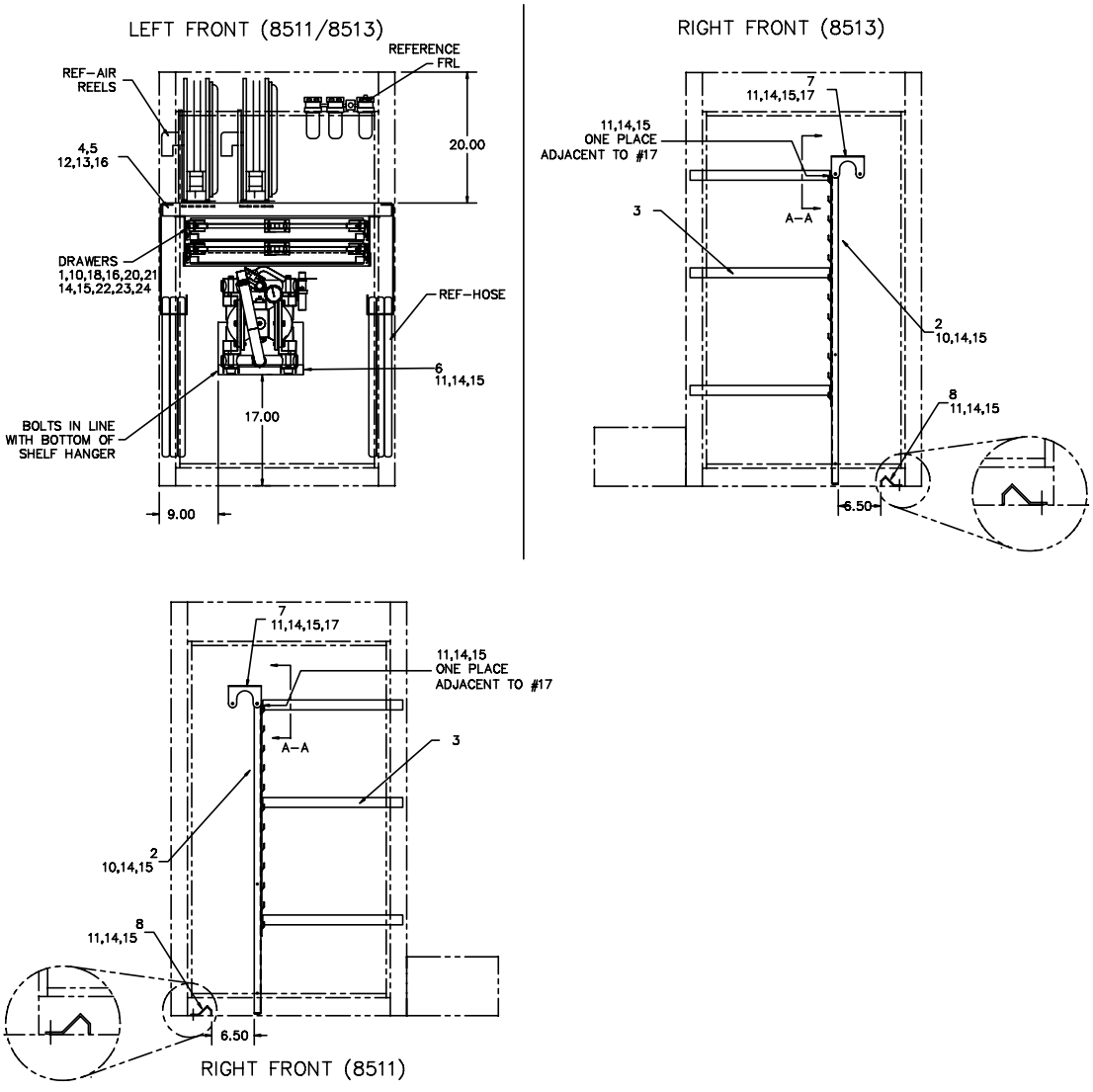


LEFT FRONT RIGHT FRONT

SERIAL NUMBERS PRED021074 TO PRESENT.

SHELF - PREDATOR W/ $CACL_2$ SYSTEM (51715868)

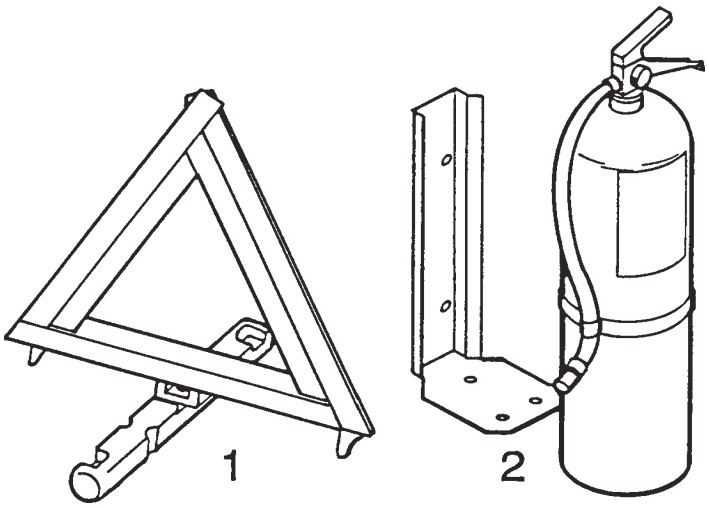
1.	60131205	BRACKET-ROLLOUT DRAWER SRD	1
2.	52715818	DIVIDER	1
3.	60121842	ADJUSTABLE SHELF - 17 X 21.38	3
4.	60124755	CHANNEL	1
5.	60122228	BRACKET-ROLLOUT DRAWERS	2
6.	60250816	SHELF-CALCIUM PUMP	1
7.	60122241	BRACKET-STOP TIRE CAGE	1
8.	60122242	BRACKET-TIRE CAGE BOTTOM	1
9.	60250817	BRACKET-SILLCOCK MTG	1
10.	72060023	CAP SCR 5/16-18X 3/4 HHGR5Z	4REF
11.	72060025	CAP SCR 5/16-18X1.00 HHGR5Z	10REF
12.	72060092	CAP SCR 1/2-13 X 1.25 HHGR5Z	8REF
13.	72062080	NUT 1/2-13 HEX NYLOC	8REF
14.	72062109	NUT 5/16-18 HEX NYLOC	14REF
15.	72063002	WASHER 5/16 FLAT	25REF
16.	72063005	WASHER 1/2 FLAT	16REF
17.	72063050	WASHER 5/16 LOCK	1REF
18.	70733798	DRAWER W/DIVIDERS - PAINTED	2
	(UNPAINTED - 70733414 - REF, SERVICE)		
19.	60119271	BRACKET-ROLLOUT DRAWER	4
20.	72601284	SCR-MACH 10-24 X 5/8 FLH SLOT	16REF
21.	72601283	SCR-MACH 10-24 X 1/2 PN SL	16REF
22.	72062106	NUT 10-24 HEX NYLOC	32REF
23.	70731440	DRAWER-SLIDE 16"	4
24.	60123357	BRACKET-REEL SHELF SUPPORT	2



SERIAL NUMBERS PRED021074 TO PRESENT.

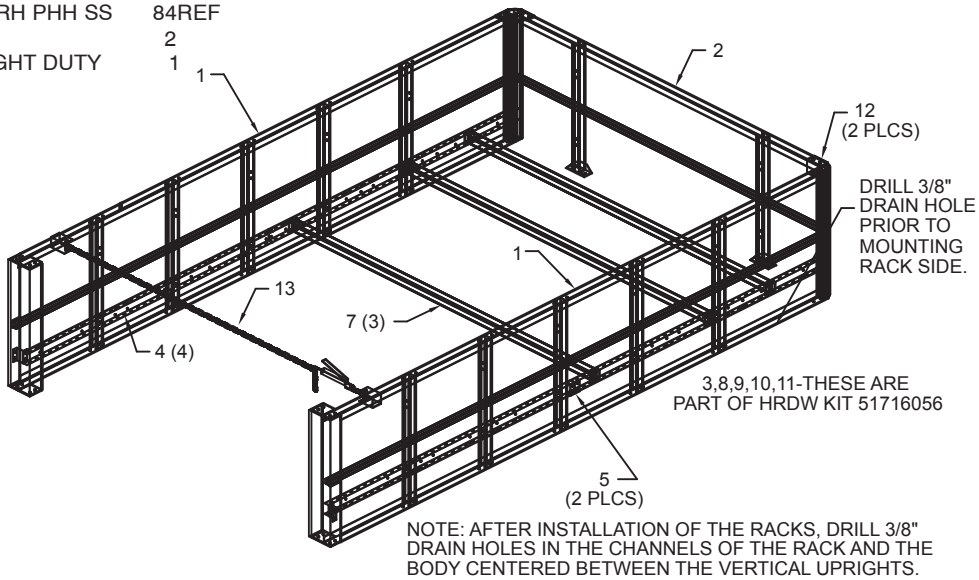
I.C.C. SAFETY KIT (92091010)

1.	70073146	TRIANGULAR REFLECTOR KIT (Includes 3 reflectors and case)	1
2.	70073147	FIRE EXTINGUISHER (with bracket)	1



RACK EXTENSION KIT-72” (51715984) - 8513

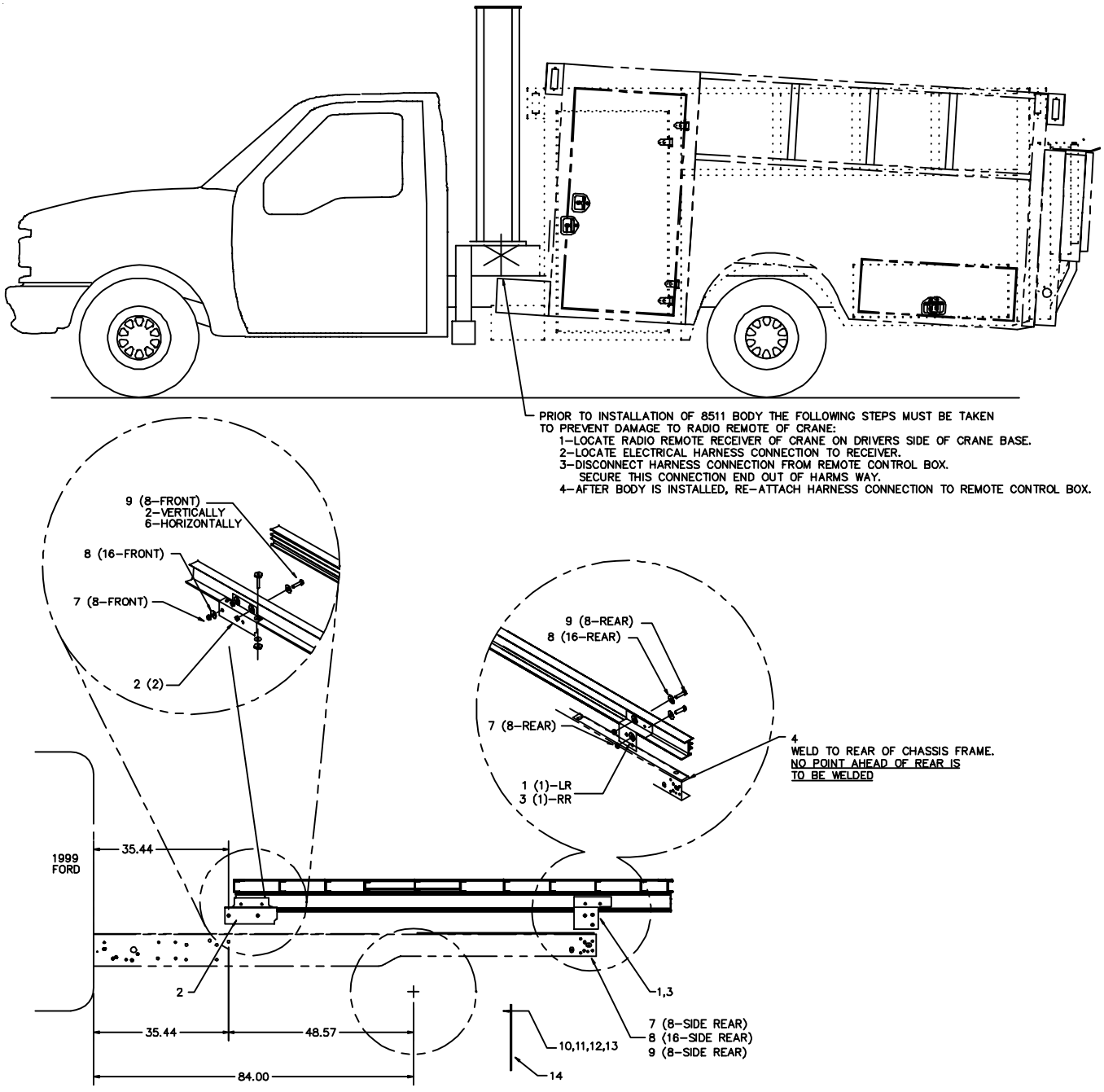
1.	52725531	RACK EXTENSION	2
2.	52725532	RACK EXTENSION-FRONT	1
3.	76392821	WASHER 3/8 BONDED	12REF
4.	60122535	CHANNEL	4
5.	60122536	PLATE	2
6.	60122575	SPACER	2REF
7.	52716013	DIVIDER BAR	3
8.	71731461	T-PIN QUICK RELEASE	6REF
9.	72062167	NUT 5/16-18 LOCK SS	84REF
10.	72063152	WASHER 5/16 WRT SS	84REF
11.	72601590	CAP SCR 5/16-18X1 TRH PHH SS	84REF
12.	60025255	CORNER GUSSET	2
13.	51705828	CROSS CHAIN KIT-LIGHT DUTY	1



SERIAL NUMBERS PRED991001 TO PRED021073.

INSTALLATION KIT-F550 19000 GVW (93716272)

1.	60122775	BRACKET-REAR MTG-LH REAR	1
2.	60122774	BRACKET-FRONT MTG	2
3.	60122776	BRACKET-REAR MTG-RH REAR	1
4.	60122777	SHIM-REAR	2
7.	72062275	NUT 9/16-12 HEX TOP LOCK GR8	16REF
8.	72063117	WASHER 9/16 FLAT HARD	32REF
9.	72601144	CAP SCR 9/16-12X2 HHGR8	16REF
10.	72060005	CAP SCR 1/4-20X1-1/4 HHGR5	6REF
11.	72062104	NUT 1/4-20 LOCK	6REF
12.	72063001	WASHER 1/4 WRT	6REF
13.	72661471	WASHER 1/4X1 OD FENDER	6REF
14.	76395819	MUD FLAP	2



SERIAL NUMBERS PRED991001 TO PRESENT.

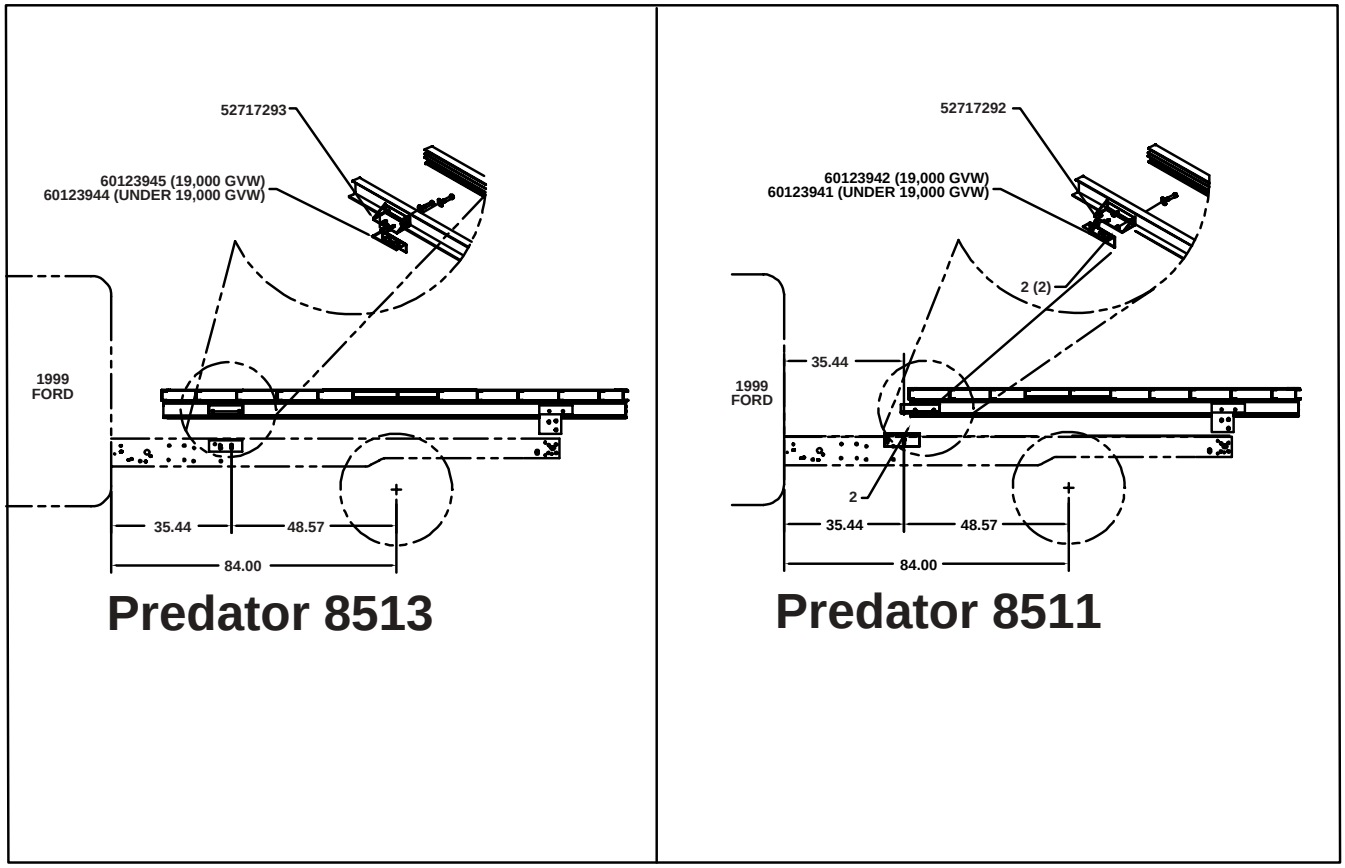
INSTALLATION KIT-F550 19000 GVW (93716273)

1.	60122775	BRACKET-REAR MTG-LH REAR	1
2.	60122778	BRACKET-FRONT MTG	2
3.	60122776	BRACKET-REAR MTG-RH REAR	1
4.	60122777	SHIM-REAR	2
7.	72062275	NUT 9/16-12 HEX TOP LOCK GR8	16REF
8.	72063117	WASHER 9/16 FLAT HARD	32REF
9.	72601144	CAP SCR 9/16-12X2 HHGR8	16REF
10.	72060005	CAP SCR 1/4-20X1-1/4 HHGR5	6REF
11.	72062104	NUT 1/4-20 LOCK	6REF
12.	72063001	WASHER 1/4 WRT	6REF
13.	72661471	WASHER 1/4X1 OD FENDER	6REF
14.	76395819	MUD FLAP	2
15.	51716036	HARDWARE KIT	1

INSTALLATION DW - DUAL FUEL TANKS - FORD SUPERDUTY (99903407)

FASTENER KIT (51717296) INCLUDES:

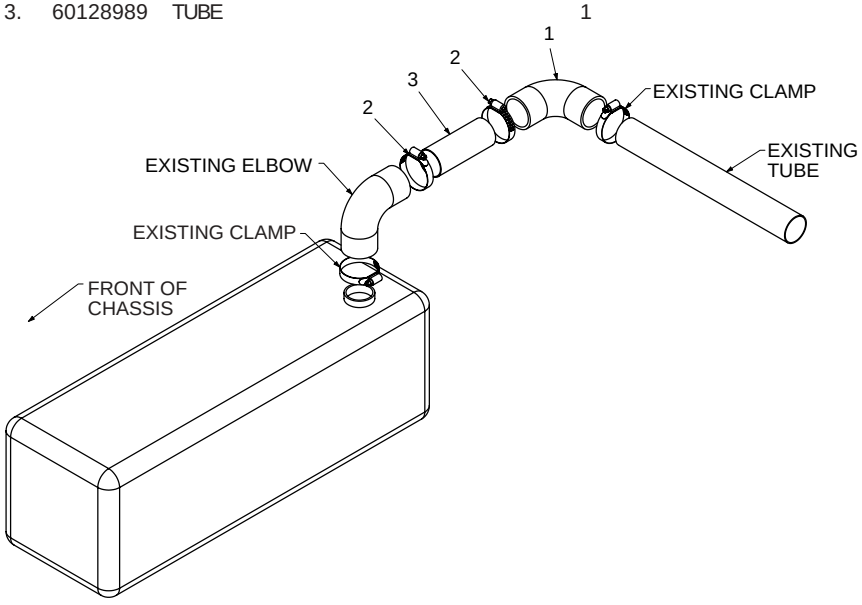
1.	72062275	NUT 9/16-12 HEX LOCK GR8	2
2.	72063117	WASHER 9/16 FLAT	4
3.	72601144	CAP SCR 9/16-12 x 2.00 HH GR8	2



FUEL FILL, CHEVY/GMC (99903710)

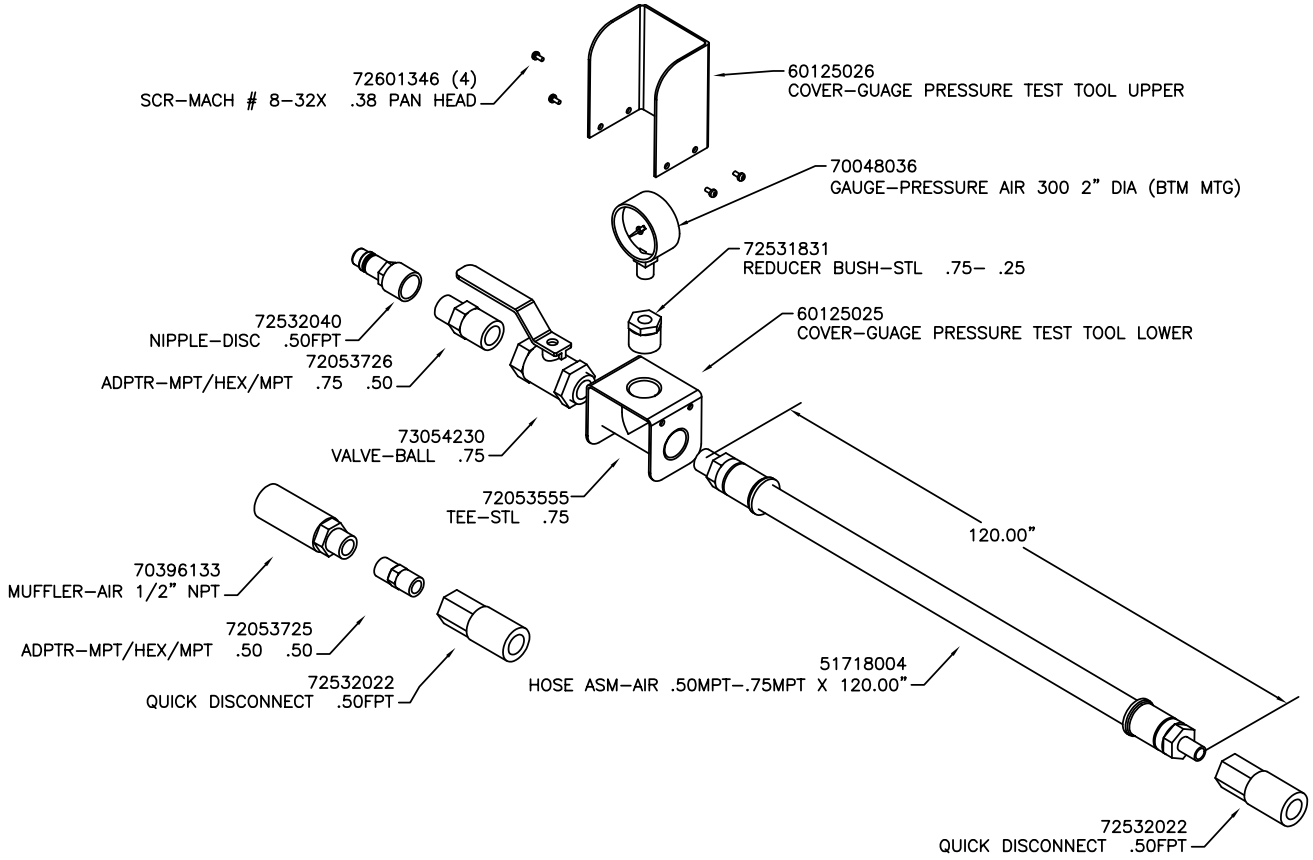
NEW 20051018

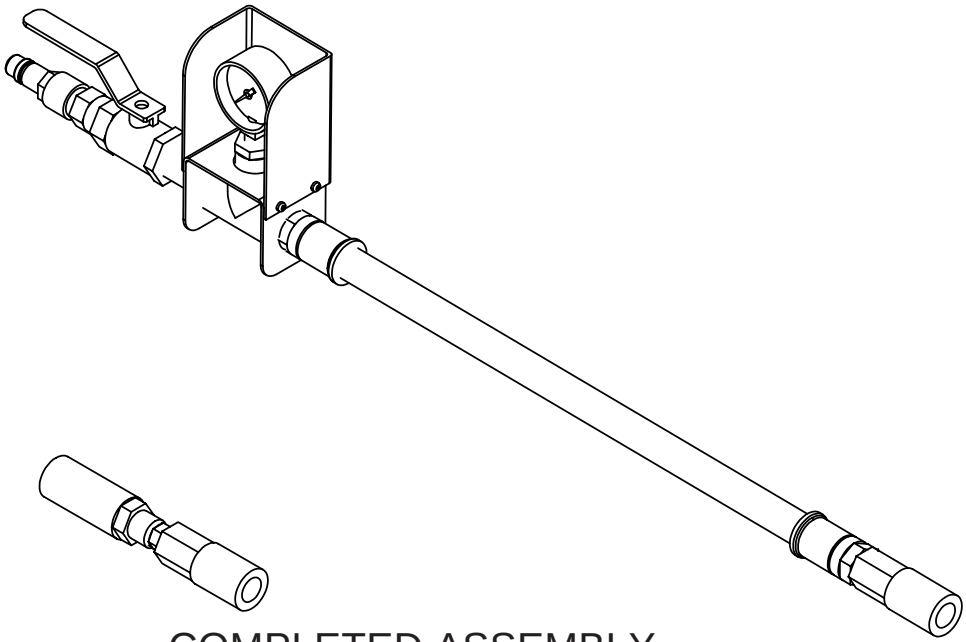
1.	70396444	ELBOW, 90 DEG FUEL HOSE 2" (RUBBER)	2
2.	72066062	HOSE CLAMP	4
3.	60128989	TUBE	1



SERIAL NUMBERS PRED991001 TO PRESENT.

TIRE INFLATION / PRESSURE CHECK TOOL ASM (51717984)

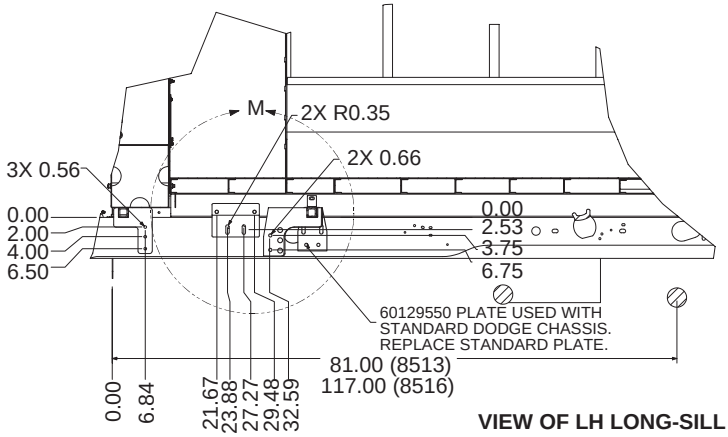




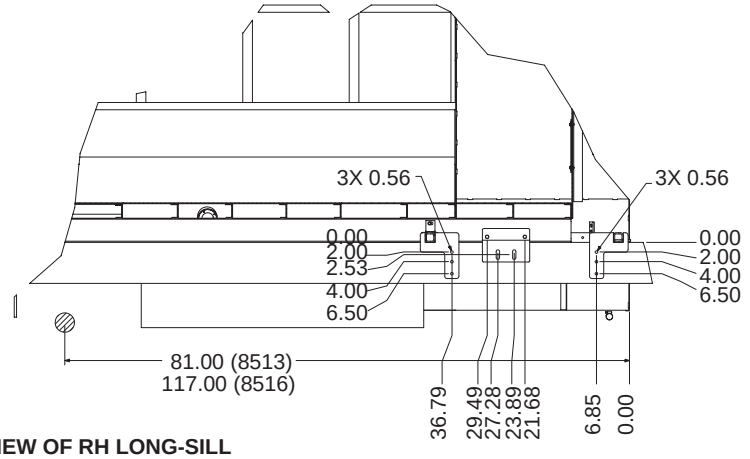
COMPLETED ASSEMBLY

CAS440HU COMPRESSOR INSTALLATION (99903962-1)

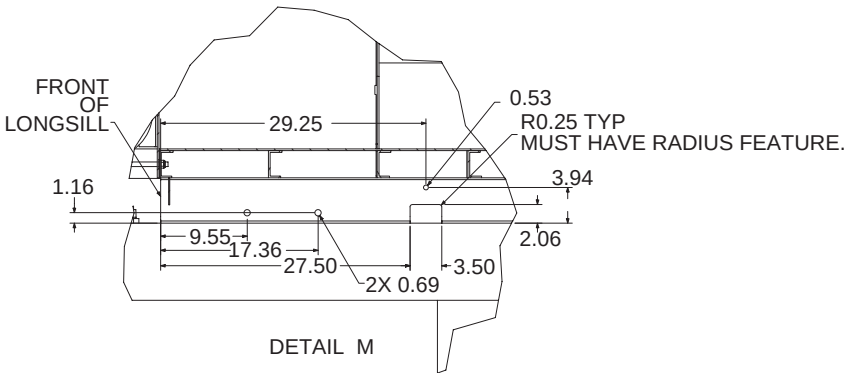
1.	52720150	FRAME-COMPESSOR	1
2.	60129552	BRACKET-MOUNTING	2
3.	51720149	COMPRESSOR-DA440HU FOR PRED	1
4.	72062080	NUT .50-13 HEX NYLOCK	9
5.	72063005	WASHER .50 FLAT	16
6.	72060093	CAP SCREW .50-13X 1.50 HH GR5 Z	8
7.	72532552	HOSE FITTING- 4 .25 BRS	1
8.	51709358	DRAIN ASM-AIR TANK UNDER DECK	1
9.	60130639	PANEL-FILLER-DA440HU GUARD	1
10.	72531550	NIPPLE-BARB STL 1.25MPT 1.25	1
11.	72531135	ELBOW-STREET STL 1.25 X 90 DEG	2
12.	72053729	ADPTR-MPT/HEX/MPT 1.25 1.25	2
13.	73054232	VALVE-BALL 1.25	1
14.	73052012	FILTER-HYD SUC-100 MESH W/GAGE	1
15.	52720782	MANIFOLD-WLDMT AIR FLTR	1
16.	70048215	FILTER-AIR ASSY	1
17.	70048216	BAND-AIR FILTER 4.8	1
18.	70048222	INDICATOR-AIR FILTER	1
19.	70048223	CAP-AIR FILTER 4.8	1
20.	76396153	INSERT-RUBBER AIR FILTER 2.5 X 1.75	1
21.	60111854	ADAPTER-RMT AIR FLTR	2
22.	60103870	BRACKET-OIL FILTER	1
23.	60132927	COVER-CAS440HU SIDE	1
24.	60129550	PLATE-MOUNTING	1
25.	72661657	CLAMP-HOSE .75 STEPLESS EAR	3
26.	72661642	CLAMP-HOSE 1.75 T-BOLT	3
27.	99904497	DRAWING-PRED W-DA440HU	REF



VIEW OF LH LONG-SILL

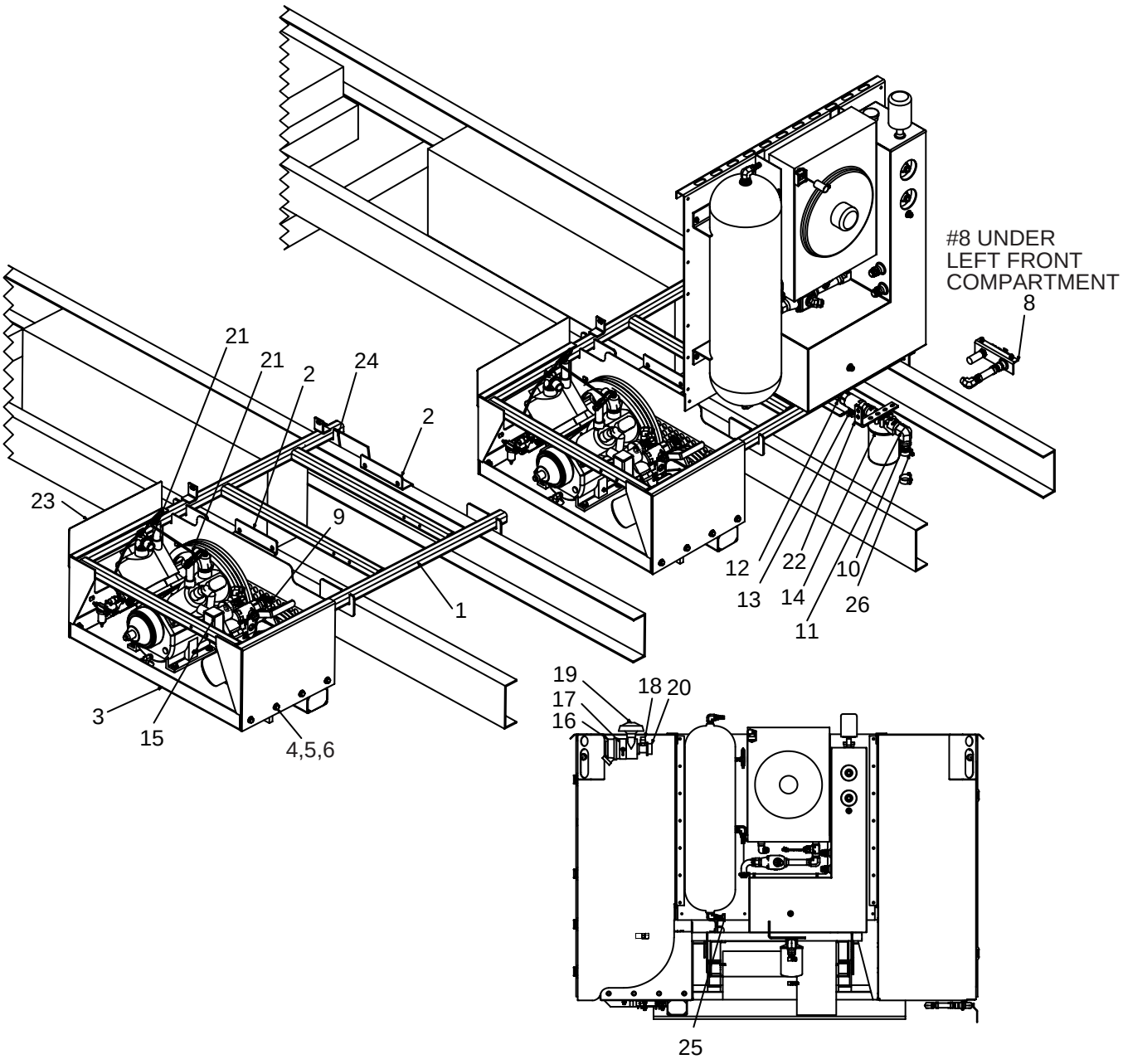


VIEW OF RH LONG-SILL



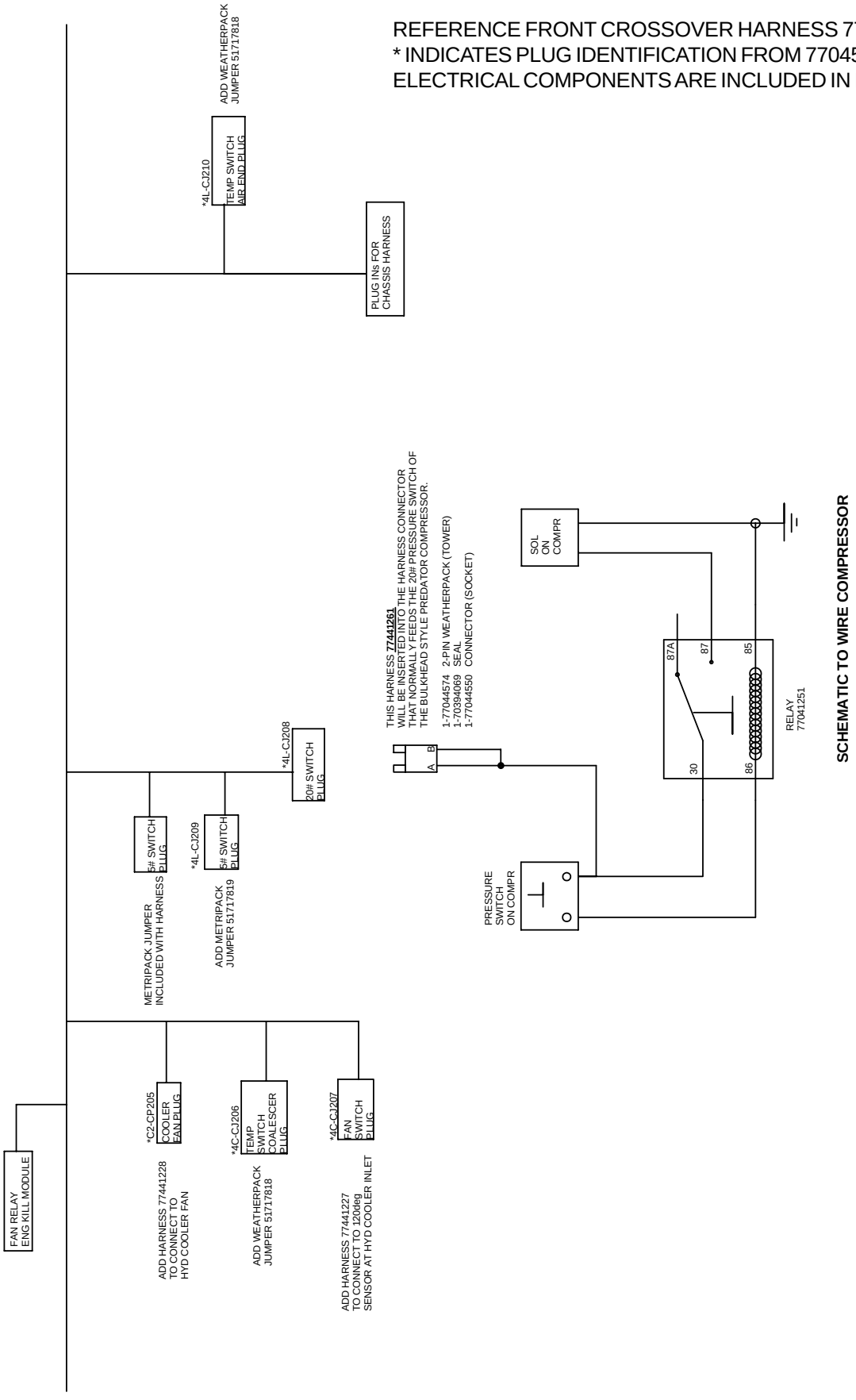
DETAIL M

CAS440HU COMPRESSOR INSTALLATION (99903962-2)



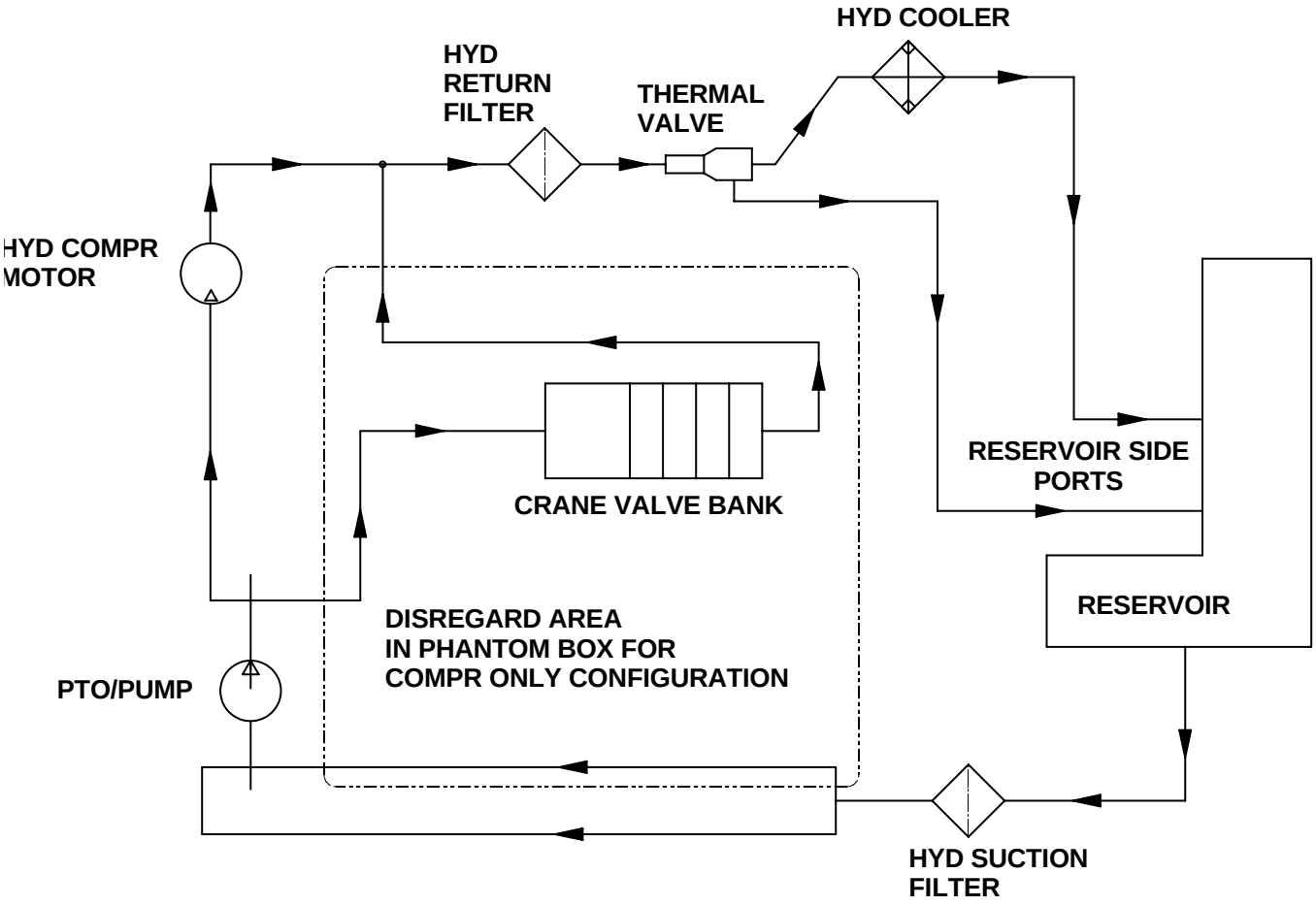
CAS440HU COMPRESSOR INSTALLATION (99903962-3)

REFERENCE FRONT CROSSOVER HARNESS 77045896.
* INDICATES PLUG IDENTIFICATION FROM 77045896.
ELECTRICAL COMPONENTS ARE INCLUDED IN KIT 51720775.



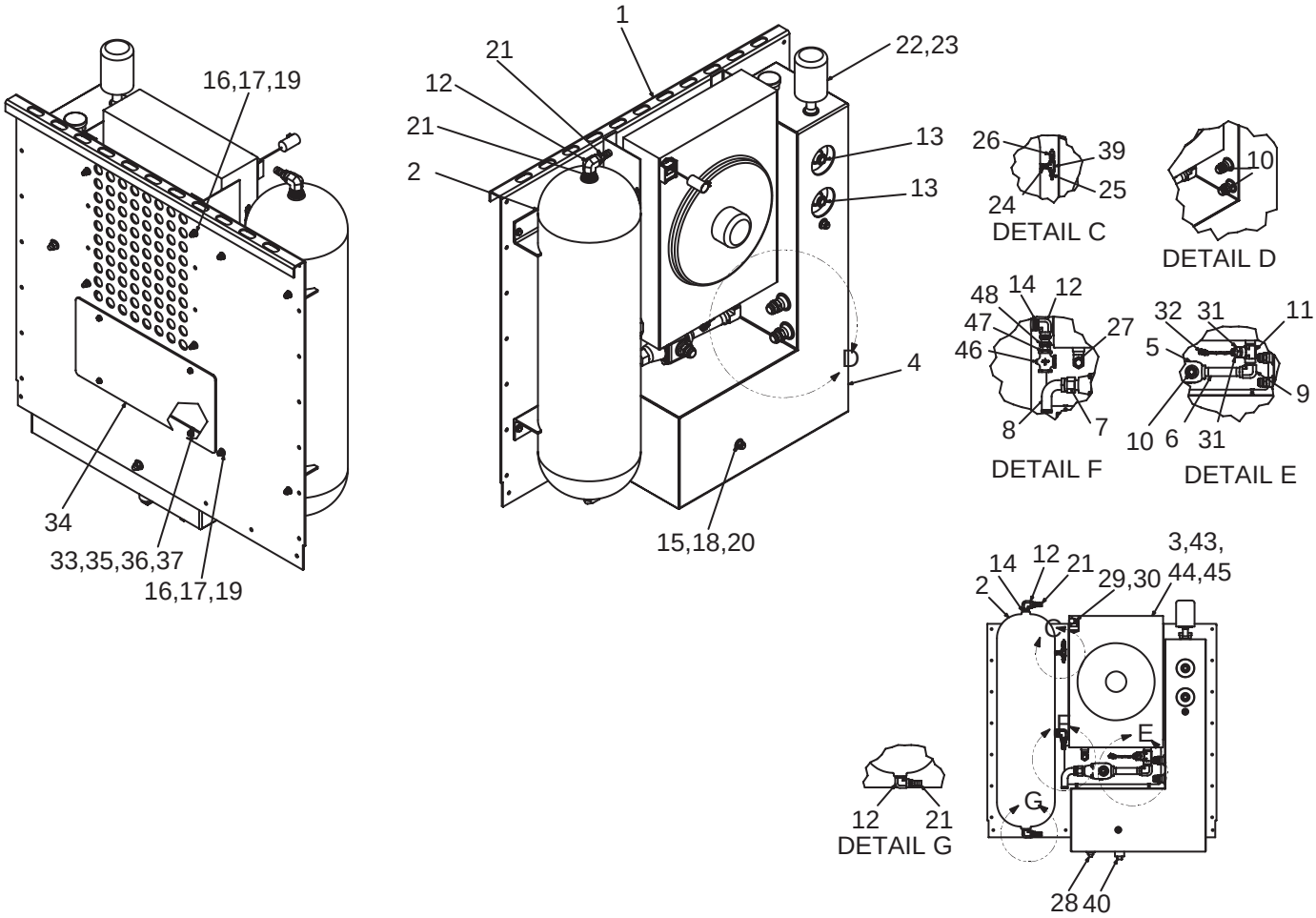
SCHEMATIC TO WIRE COMPRESSOR

CAS440HU COMPRESSOR INSTALLATION (99903962-4)



PANEL ASSEMBLY, CAS440HU COMPRESSOR (99904497)

1.	60251226	PANEL-BULKHEAD	1
2.	70733696	TANK-AIR 20 GAL	1
3.	51719994	OIL COOLER KIT	1
4.	52720167	RESERVOIR-WELDMENT 31 GAL	1
5.	73540129	VALVE-THERMAL	1
6.	72053192	NIPPLE-PIPE BLK 1.00X 6.00	1
7.	72532860	ADPTR-MPT/FPT STL 1.00 1.25	1
8.	72532346	NIPPLE-BARB 90 DEG 1.25 1.25	1
9.	72531134	ELBOW-STREET STL 1.00 X 90 DEG	1
10.	72053680	ADPTR-MPT/M JIC 1.00 16	3
11.	72534382	TEE-STREET STL 1.00	1
12.	72053556	ELBOW-STREET STL .75 X 90 DEG	3
13.	72532681	SIGHT GAUGE- .75 PLUG W/REFLCT	2
14.	72053559	REDUCER BUSHING-STL 1.00- .75	2
15.	72062080	NUT .50-13 HEX NYLOCK	4
16.	72062103	NUT .38-16 HEX NYLOCK	12
17.	72063003	WASHER .38 FLAT	24
18.	72063005	WASHER .50 FLAT	4
19.	72060047	CAP SCREW .38-16X 1.25 HH GR5 Z	12
20.	60109307	ROD-THREADED .50-13 X 14.00	2
21.	72053458	NIPPLE-BARB BRS .75MPT .75	2
22.	72533514	ADPTR-BREATHER FILTER OIL TANK	1
23.	73054974	FILTER-BREATHER OIL RESERVOIR	1
24.	72053517	ADPTR-MPT/HEX/MPT .25 .25	1
25.	72532552	HOSE FTG-TYPE O 4 .25 BRS	1
26.	73054032	VALVE-PRESSURE RELIEF .25 200 PSI	1
27.	72531430	ELBOW-MPT/90/M JIC 1.00 16	1
28.	73052001	PLUG-PIPE MAGNETIC .75NPT SQHD	2
29.	77041655	RELAY MODULE	1
30.	72061099	SCR-TEK 10-16X .62 HWH	2
31.	72531835	REDUCER BUSH-STL 1.00- .50	1
32.	77041659	SWITCH-TEMP FAN NO 120 DEGREES	1
33.	72062301	NUT-TINNERMAN 1/4-20UNC	4
34.	60251239	COVER	1
35.	72063001	WASHER .25 FLAT	4
36.	72063049	WASHER .25 LOCK	4
37.	72060002	CAP SCR .25-20X .75 HH GR5 Z	4
39.	72053610	TEE-STL .25	1
40.	72053249	PLUG-PIPE SQ HD BLK 1.25	1
41.	51397654	HOSE-FJ 1.00 X 10.50 (16-16) 100R4	1
42.	51397655	HOSE-FJ 1.00 X 15.50 (16-16) 100R4	1
43.	77044573	CONNECTOR	1
44.	70394069	CABLE SEAL	2
45.	77045887	TERMINAL	2
46.	301142	VALVE-CHECK .75 IN	1
47.	72053558	ADPTR-MPT/HEX/MPT .75 .75	1
48.	72053645	ADPTR-MPT/FPT SWVL .75 .75	1



SECTION 3. AIR SYSTEM COMPONENTS

COMPRESSOR PANEL ASM (41715841-1) (1999 ONLY) 2
COMPRESSOR PANEL ASM (41715841-2) (1999 ONLY) 3
COMPRESSOR PANEL ASM (41715841-3) (1999 ONLY) 4
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COMPRESSOR PANEL ASM (41715886-3) (2000 THRU PRED021073) 8
COMPRESSOR PANEL ASM (41715886-4) (2000 THRU PRED021073) 9
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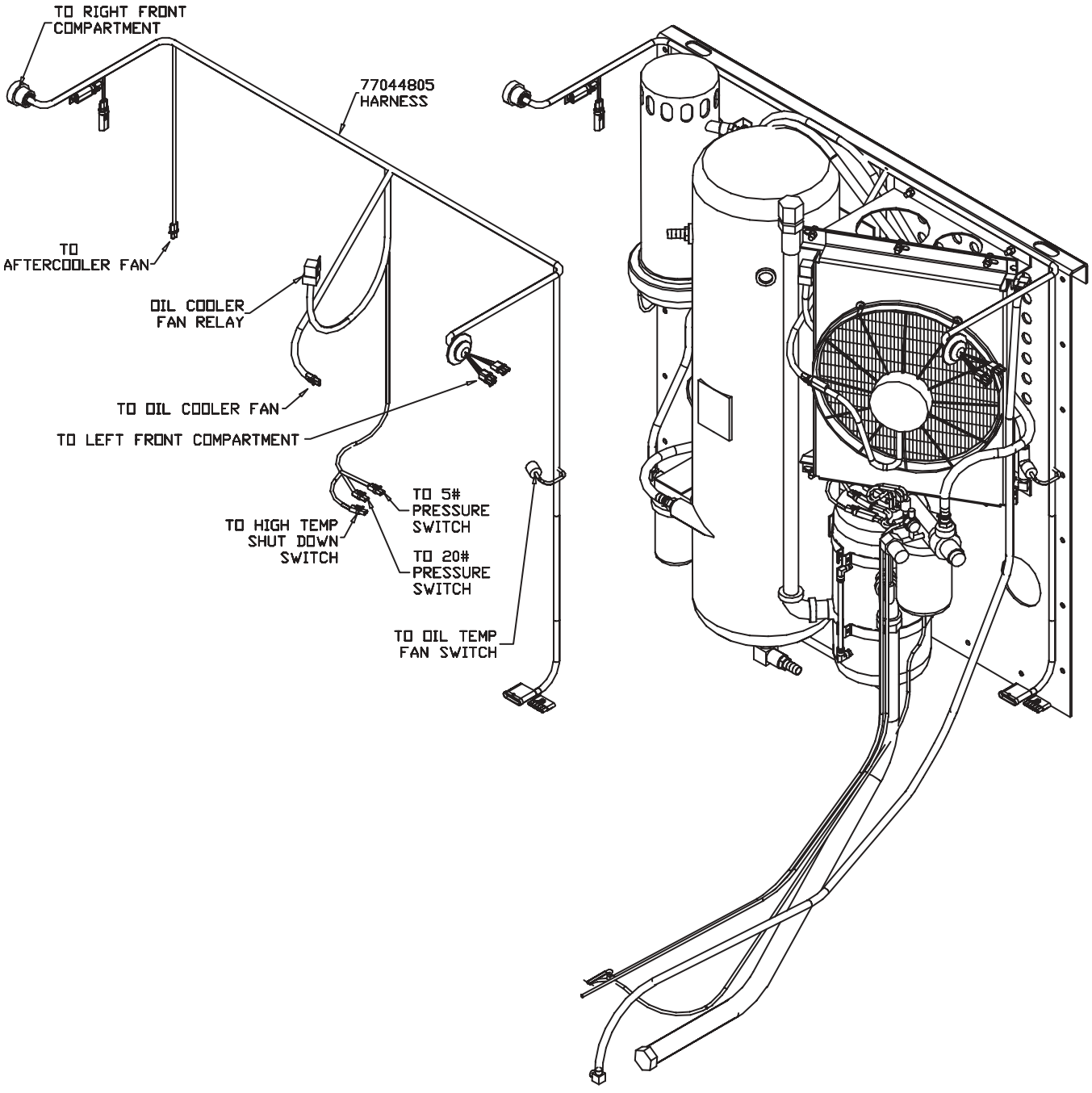
HOSE REEL KIT-1/2 X 50' HOSE (51706347) (EFF 5-1-03 THRU 5-28-03) 19
HOSE REEL - STREET SIDE (70733732) (THRU 4-30-03, AFTER 5-28-03) 19
PANEL ASM (41715887) (THRU 9/02) 20
PANEL ASM (51717813) (EFF. 9/02) 21

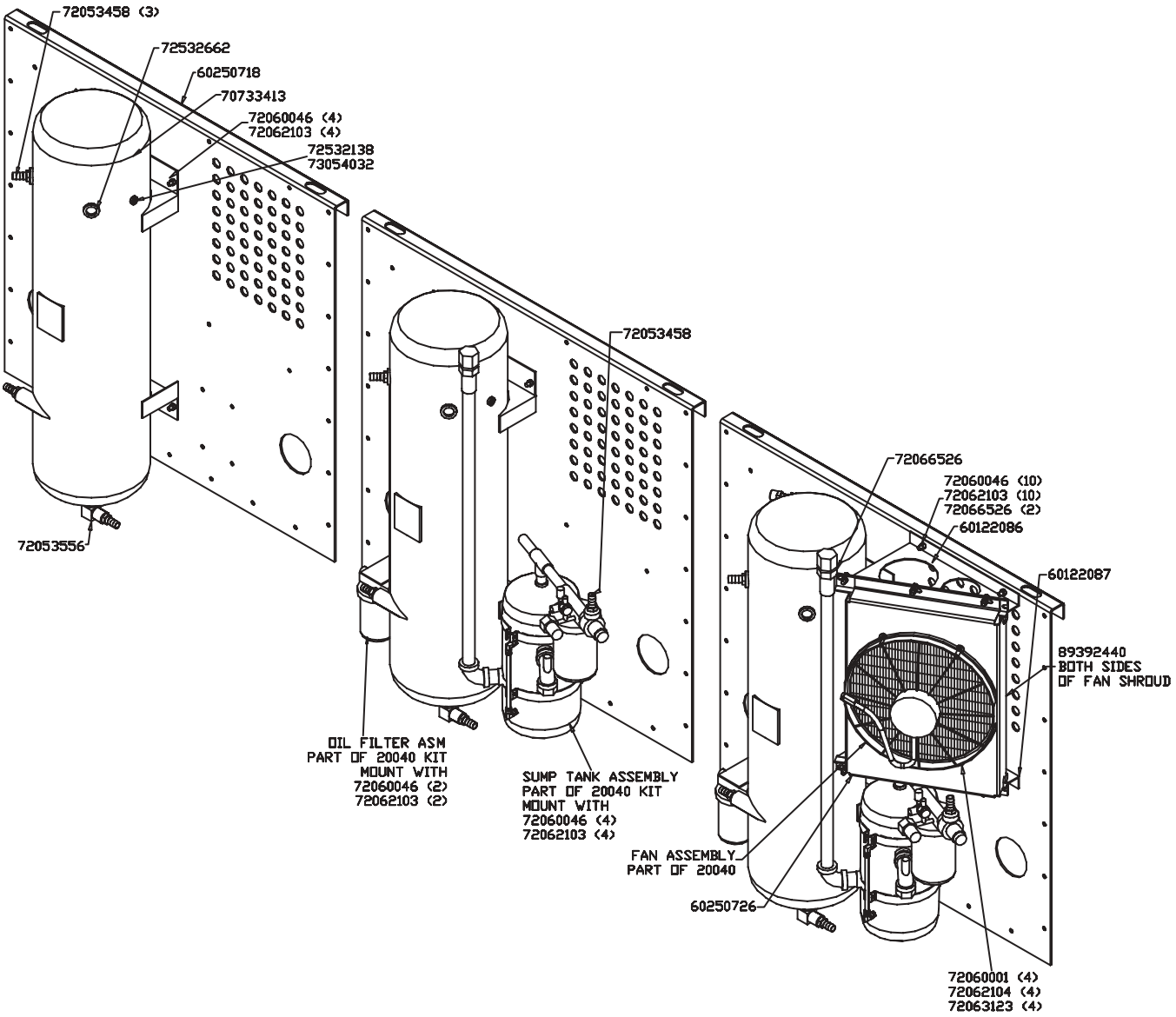
COMPRESSOR PANEL ASM (41715841-1) (1999 ONLY)

1.	60250718	PANEL	1
2.	60250726	SHROUD	1
3.	89392440	WEATHERSTRIP-EDGE	3.5’
4.	60122086	BRACKET-LH	1
5.	60122087	BRACKET-RH	1
6.	70733401	KIT-AFTER COOLER	1
7.	70733413	AIR TANK	1
8.	73054032	SAFETY VALVE 1/4NPT 200PSI	1
9.	77044805	HARNESS-CMPRSR CTRL	1
10.	20040	COMPRESSOR	1
11.	72060001	CAP SCR 1/4-20X5/8 HHGR5	4
12.	72060046	CAP SCR 3/8-16X1 HHGR5	28
13.	72062104	NUT 1/4-20 LOCK	4
14.	72062103	NUT 3/8-16 LOCK	28
15.	72053458	BARB NIPPLE 3/4MPT 3/4HOSE	4
16.	72532794	BARB NIPPLE 3/8MPT 3/4 HOSE	2
17.	72531836	REDUCER BUSHING 1-1/4 3/4NPT	2
18.	72532662	PIPE PLUG 3/5NPT SH	1
19.	72066065	HOSE CLAMP 3/4 - 1-3/4	4
20.	72066526	HOSE CLAMP-VINYL CVRD 1”	3
21.	89392349	HOSE 3/4 GP	8’
22.	72053556	STREET ELBOW 3/4NPT 90°	1
23.	72532138	REDUCER BUSHING 3/8 1/4NPT	1



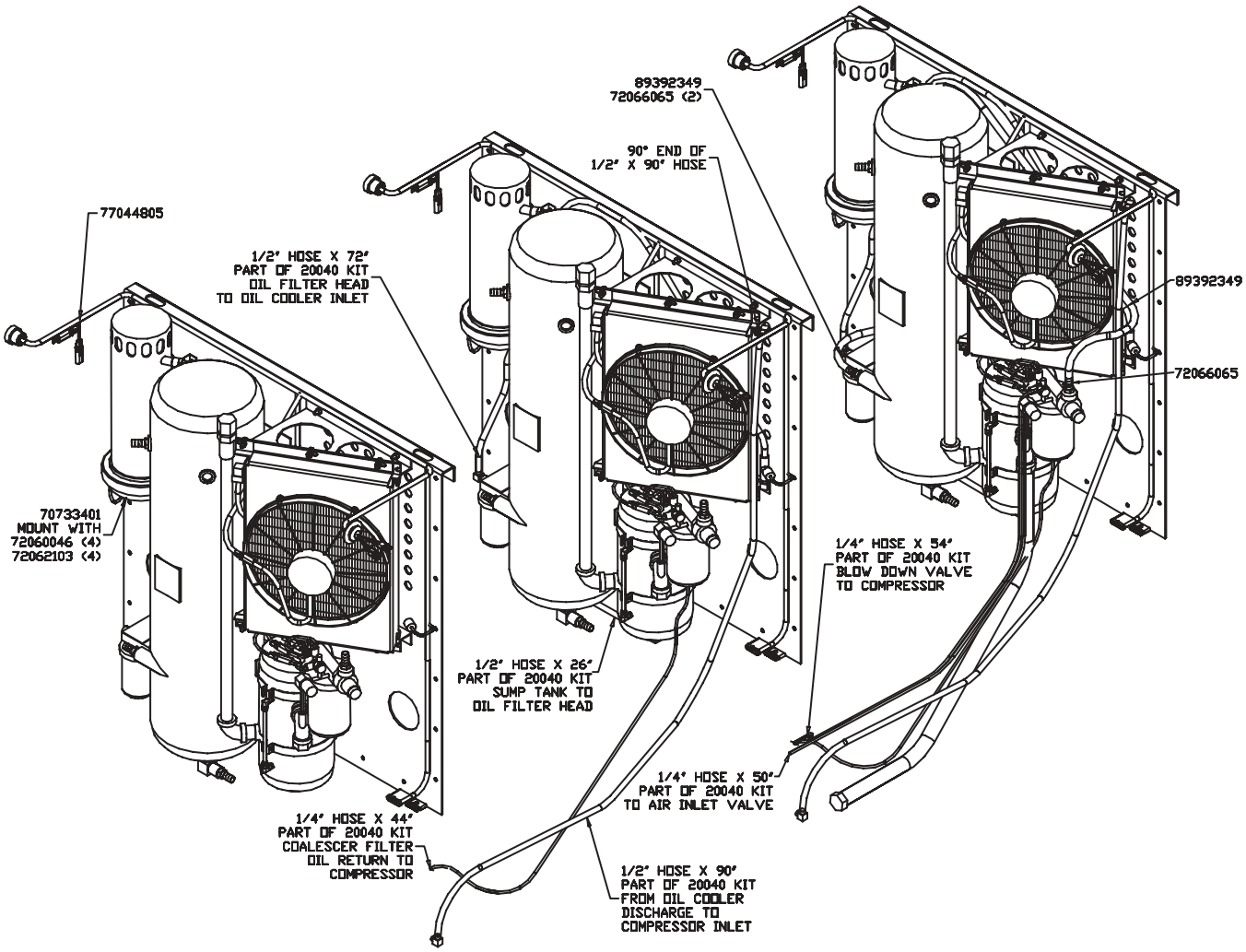
SERIAL NUMBERS PRED991001 THROUGH JANUARY 2000.

COMPRESSOR PANEL ASM (41715841-2) (1999 ONLY)



SERIAL NUMBERS PRED991001 THROUGH JANUARY 2000.

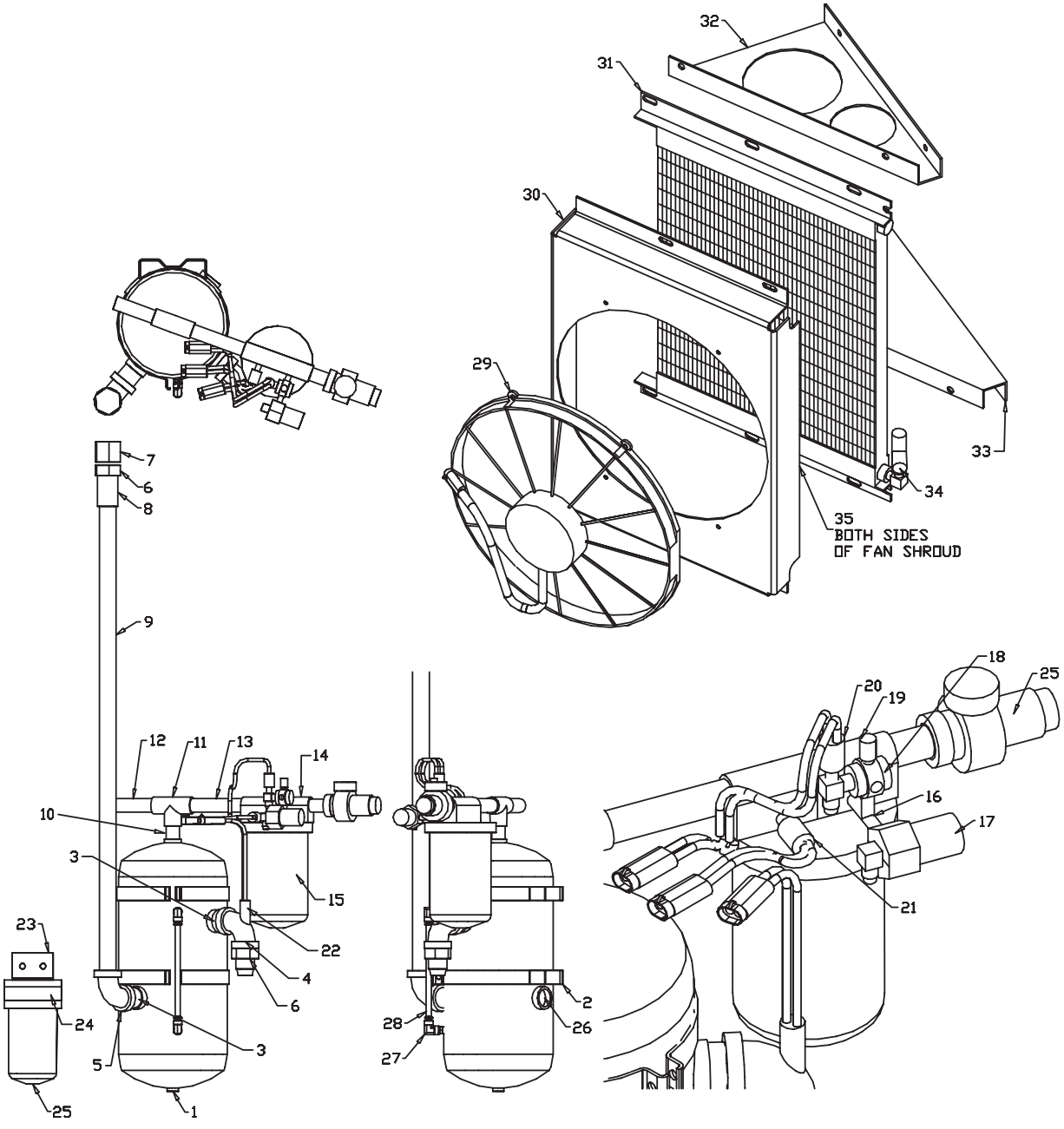
COMPRESSOR PANEL ASM (41715841-3) (1999 ONLY)



SERIAL NUMBERS PRED991001 THROUGH JANUARY 2000.

COMPRESSOR PANEL ASM (41715841-4) (1999 ONLY)

1.	300741	SUMP	1
2.	300343	BAND-SUMP MTG	2
3.	922216000	NIPPLE 1NPT X CLOSE	2
4.	906704024	REDUCER TEE 1X1.5X1.5NPT	1
5.	906530040	ELBOW 1NPT HVY	1
6.	960116100	CONNECTOR 1NPT X1JIC	2
7.	301466100	CAP 1JIC W/HOLE	1
8.	901215040	COUPLING 1NPT	1
9.	922116360	PIPE NIPPLE 1NPT X 36	1
10.	922212000	PIPE NIPPLE 3/4 X CLOSE	2
11.	906703023	REDUCER TEE .75X.50X.75	1
12.	300023200	RELIEF VALVE 200PSI	1
13.	922112040	PIPE NIPPLE 3/4NPT X 4	1
14.	300331	HEAD-COALESCER	1
15.	301670	ELEMENT-COALESCER	1
16.	9777040404	TEE 1/4NPT	1
17.	300057	REGULATOR VALVE 1/4NPT	1
18.	301827	BLOWDOWN VALVE	1
19.	300021	EXHAUST MUFFLER 1/4	1
20.	301421	PRESSURE SWITCH 5 NC MP	1
21.	301422	PRESSURE SWITCH 20 NO WP	1
22.	301040001	SHUTDOWN SWITCH	1
23.	300625	BRACKET	1
24.	300599	HEAD-OIL FILTER	1
25.	300845	MIN PRESSURE VALVE 3/4	1
26.	902915040	PIPE PLUG 1NPT HSH	1
27.	971306025	ELBOW 3/8TUBE X 1/4NPT	2
28.	300964006	TUBE 3/8	1
29.	300989	FAN ASM W/MTR (THRU 1999)	1
	301921	FAN ASM W/MTR (JAN - MAR 2000)	1
30.	60250726	FAN SHROUD	1
31.	301400	COOLER	1
32.	60122086	BRACKET-LH	1
33.	60122087	BRACKET-RH	1
34.	300072	FAN SENSOR	1
35.	89392440	WEATHERSTRIP	3.5FT



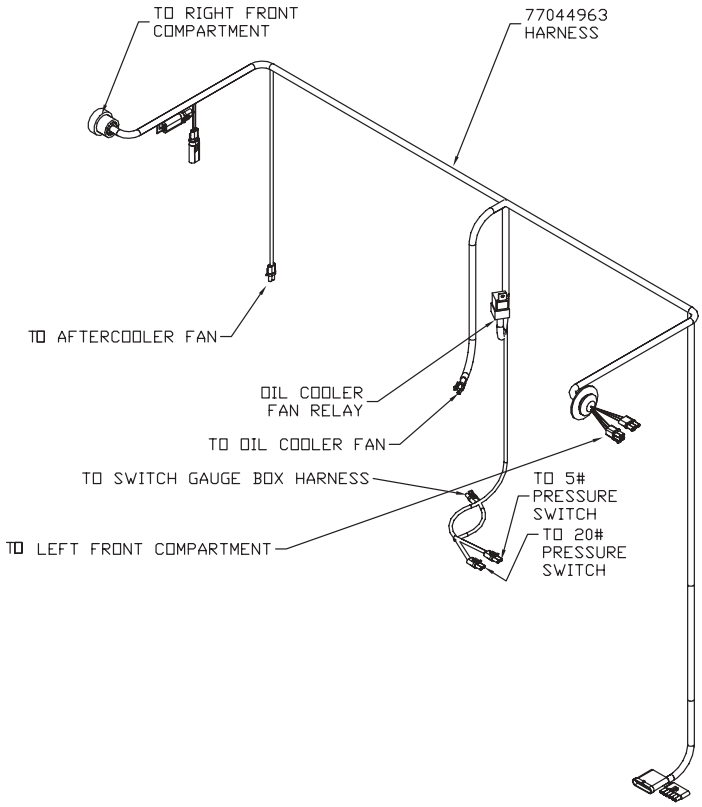
SERIAL NUMBERS PRED991001 THROUGH JANUARY 2000.

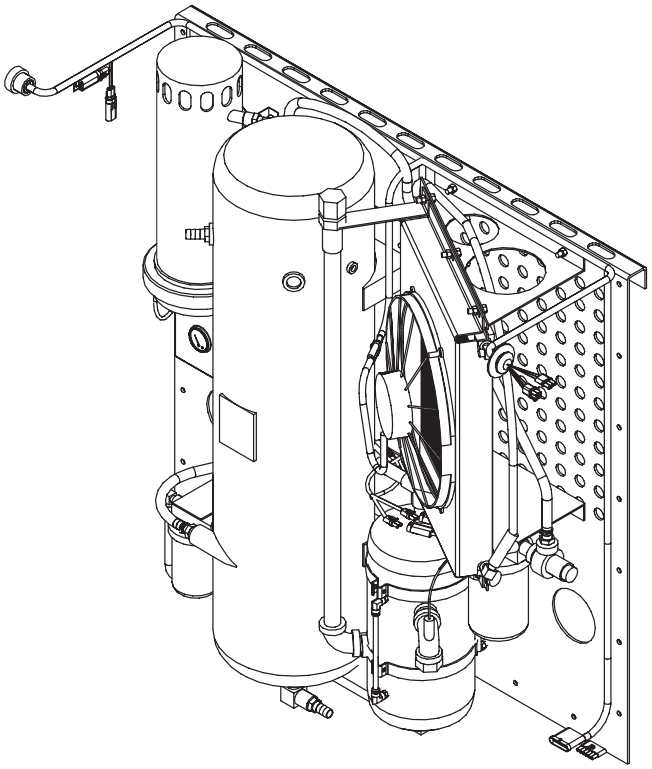
COMPRESSOR PANEL ASM (41715886-1) (2000 THRU PRED021073)

1.	60250718	PANEL	1
2.	60250726	SHROUD	1
3.	89392440	WEATHERSTRIP-EDGE	3.5’
4.	60122382	BRACKET-BOTTOM	1
5.	60122383	BRACKET-TOP	1
6.	70733401	KIT-AFTER COOLER	1
7.	70733413	AIR TANK	1
8.	73054032	SAFETY VALVE 1/4NPT 200PSI	1
9.	77044963	HARNESS (EFF: 3-1-01)	1
	77044805	HARNESS (PRE: 3-1-01)	1
10.	20040-B	COMPRESSOR-PNL COMPONENTS	1
11.	72060004	CAP SCR 1/4-20X1 HHGR5	REF
12.	72060046	CAP SCR 3/8-16X1 HHGR5	REF

CONTINUED ON FOLLOWING PAGE

13.	72062104	NUT 1/4-20 LOCK	REF
14.	72062103	NUT 3/8-16 LOCK	REF
15.	72053458	BARB NIPPLE 3/4MPT 3/4HOSE	4
16.	72531547	BARB NIP 1/2MPT 3/4 HOSE (EFF 3-1-01)	2
	72532794	BARB NIP 3/8 MPT 3/4HOSE (PRE 3-1-01)	2
17.	72531133	STREET ELBOW 1/2NPT 90° (EFF 3-1-01)	1
	72531836	RED BUSH1-1/4 3/4 NPT (PRE 3-1-01	2
18.	72053503	PIPE PLUG 3/5NPT SQHD (EFF 3-1-01)	REF
	72532662	PIPE PLUG 3/5NPT SH (PRE 3-1-01)	REF
19.	72066000	HOSE CLAMP SAE#12	REF
20.	72066581	CLAMP	REF
21.	89392349	HOSE 3/4 GP	8’
22.	72053556	STREET ELBOW 3/4NPT 90°	1
23.	72532138	REDUCER BUSHING 3/8 1/4NPT	1
24.	60122384	BRACKET-OIL FILL TUBE	1
25.	77044943	BOX-GAUGE SWITCH	1
26.	77044964	HARNESS-GAUGE SWITCH (EFF 3-1-01)	1
	77044944	HARNESS-GAUGE SWITCH (PRE 3-1-01)	1
27.	70145421	HEAT SHRINK	.16FT
28.	72063002	WASHER 5/16 WRT	REF
29.	72063129	WASHER 1/4 EXT LOCK	REF
30.	72063000	WASHER 3/16 WRT	REF
31.	51716030	KIT-HARDWARE	1





USED MARCH 2000 THROUGH PRED021073.

COMPRESSOR PANEL ASM (41715886-2) (2000 THRU PRED021073)

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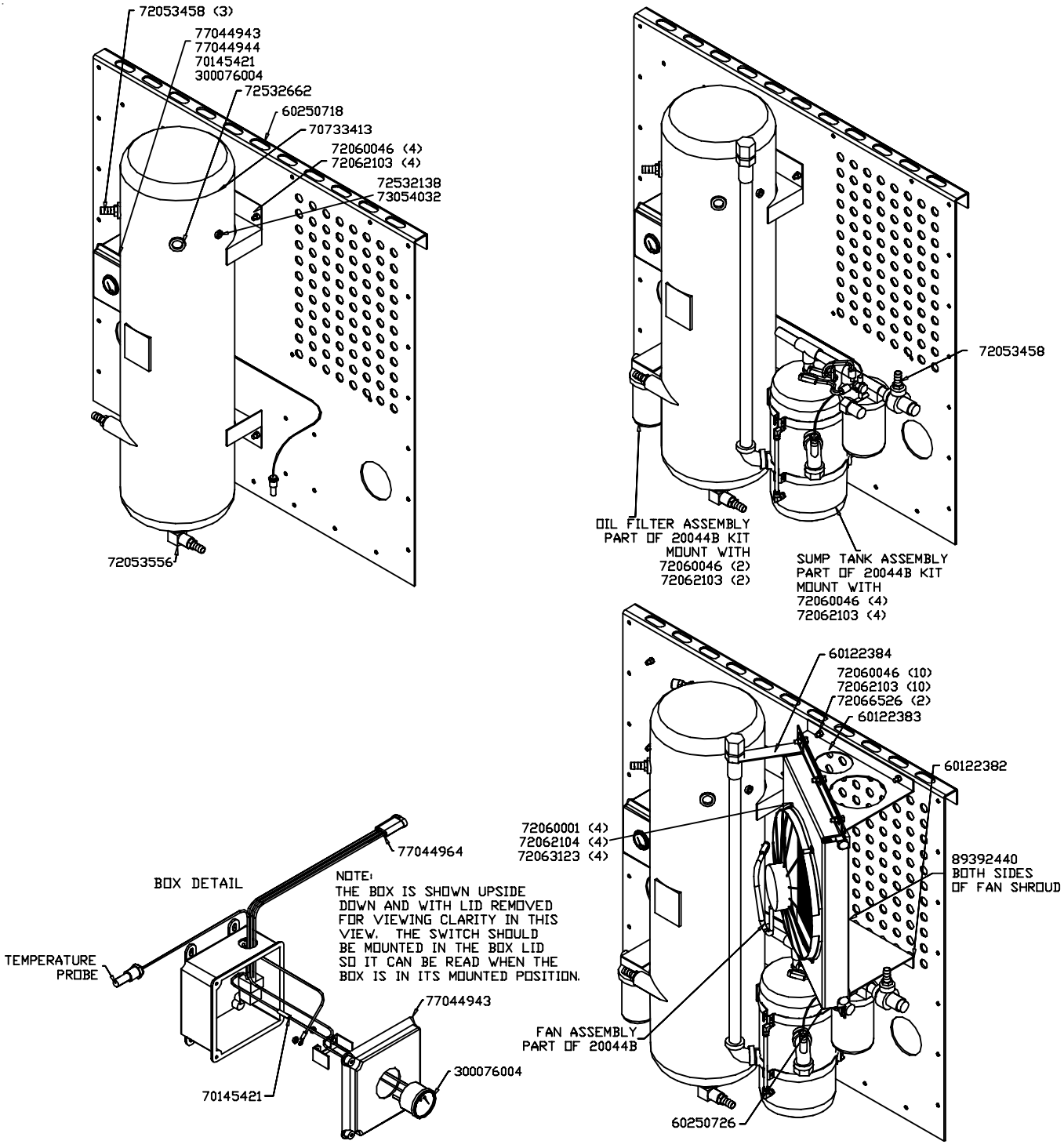

USED MARCH 2000 TO PRED021073.

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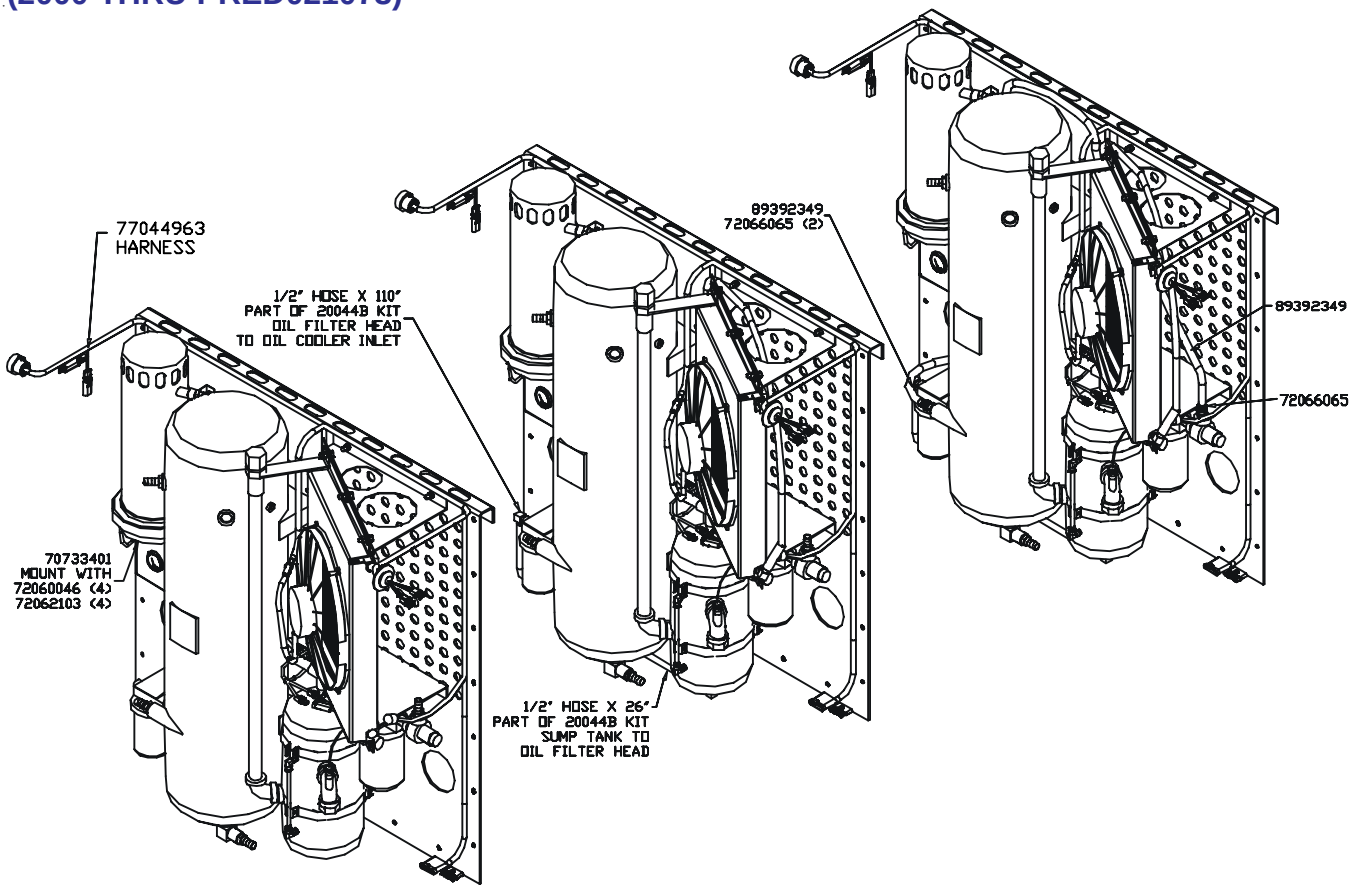
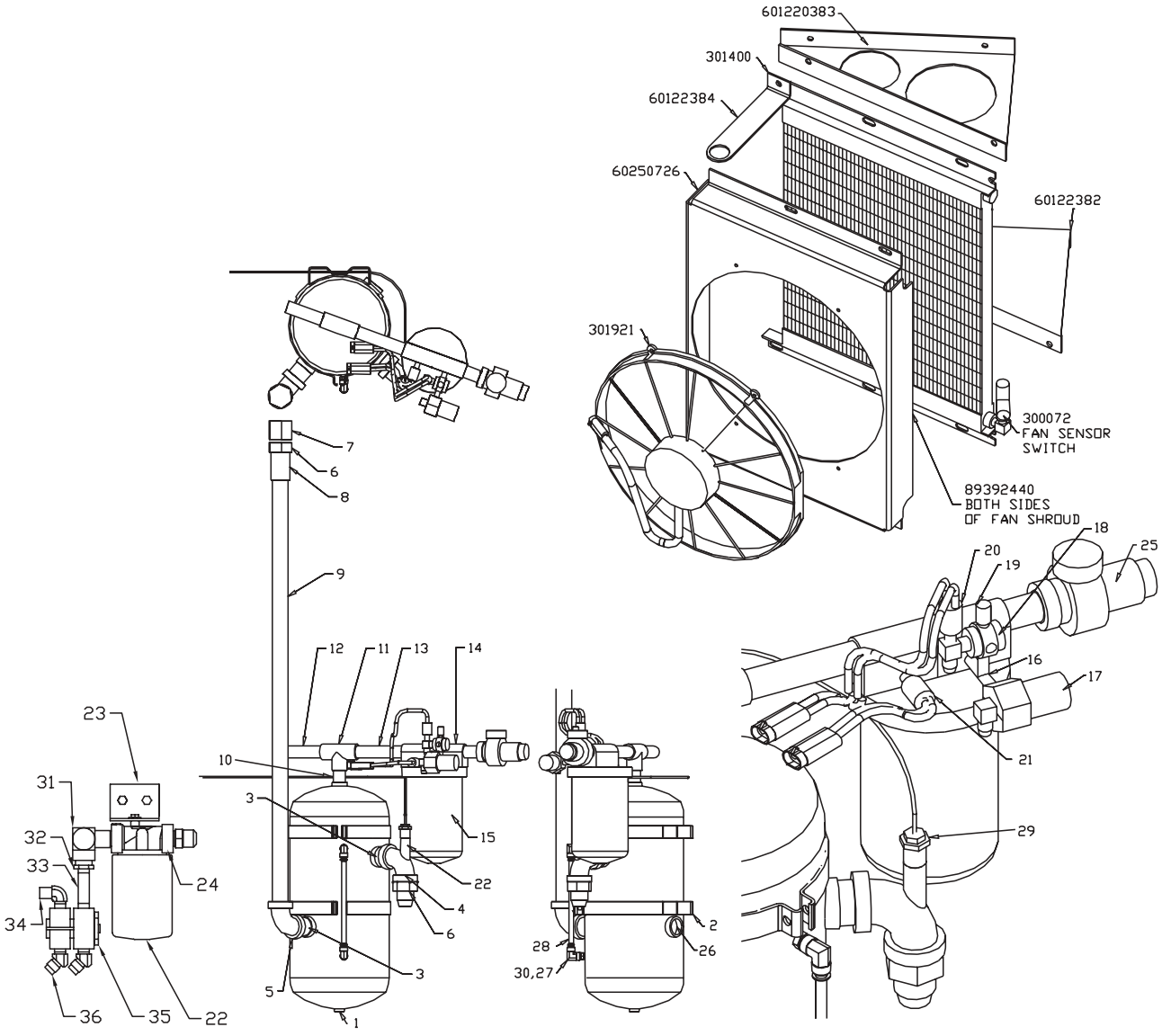
COMPRESSOR PANEL ASM (41715886-3) (2000 THRU PRED021073)



USED MARCH 2000 TO PRED021073.

COMPRESSOR PANEL ASM (41715886-4) (2000 THRU PRED021073)

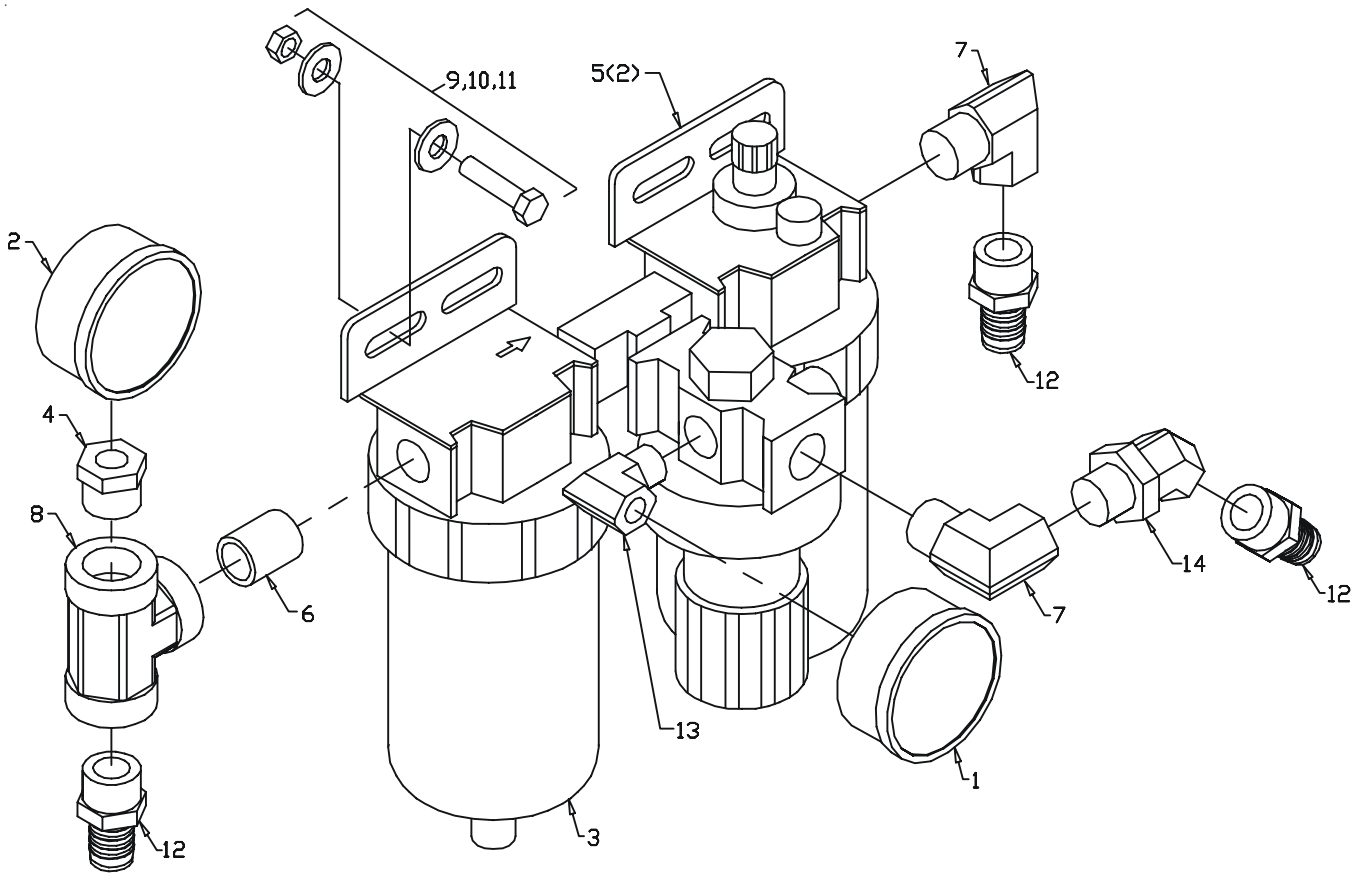
1.	300741	SUMP	1
2.	300343	BAND-SUMP MTG	2
3.	922216000	NIPPLE 1NPT X CLOSE	2
4.	906704024	REDUCER TEE 1X1.5X1.5NPT	1
5.	906530040	ELBOW 1NPT HVY	1
6.	960116100	CONNECTOR 1NPT X1JIC	2
7.	301466100	CAP 1JIC W/HOLE	1
8.	901215040	COUPLING 1NPT	1
9.	922116360	PIPE NIPPLE 1NPT X 36	1
10.	922212000	PIPE NIPPLE 3/4 X CLOSE	2
11.	906703023	REDUCER TEE .75X.50X.75	1
12.	300023200	RELIEF VALVE 200PSI	1
13.	922112040	PIPE NIPPLE 3/4NPT X 4	1
14.	300331	HEAD-COALESCER	1
15.	301670	ELEMENT-COALESCER	1
16.	9777040404	TEE 1/4NPT	1
17.	300057	REGULATOR VALVE 1/4NPT	1
18.	301827	BLOWDOWN VALVE	1
19.	300021	EXHAUST MUFFLER 1/4	1
20.	301421	PRESSURE SWITCH 5 NC MP	1
21.	301422	PRESSURE SWITCH 20 NO WP	1
22.	301040001	SHUTDOWN SWITCH	1
23.	300625	BRACKET	1
24.	300599	HEAD-OIL FILTER	1
25.	300845	MIN PRESSURE VALVE 3/4	1
26.	902915040	PIPE PLUG 1NPT HSH	1
27.	971306025	ELBOW 3/8TUBE X 1/4NPT	2
28.	300964006	TUBE 3/8	1
29.	301921	FAN ASM W/MTR (THRU 4/00)	1
	300076004	SWITCH GAUGE-TEMP	1
30.	60250726	FAN SHROUD (THRU 4/00)	1
	975200038	UNION-TUBE 3/8	2
31.	301400	COOLER (THRU 4/00)	1
	960712075	ELBOW, PIPE STR 3/4" HYD	1
32.	60122086	BRACKET LH (THRU 4/00)	1
	907603015	BUSHING, RED 3/4 x 3/4	1
33.	60122087	BRACKET RH (THRU 4/00)	1
	922206030	NIPPLE, PIPE 3/8x3 HVY	1
34.	300072	FAN SENSOR (THRU 4/00)	1
	960208038	ELBOW 1/2 JICx 3/8 MNPT 90	1
35.	89392440	WEATHERSTRIP (THRU 4/00)	3.5'
	301261	VALVE, THERMAL 3/8 - 180	1
36.	960008038	ELBOW, 1/2 JICx3/8 MNPT 45	2



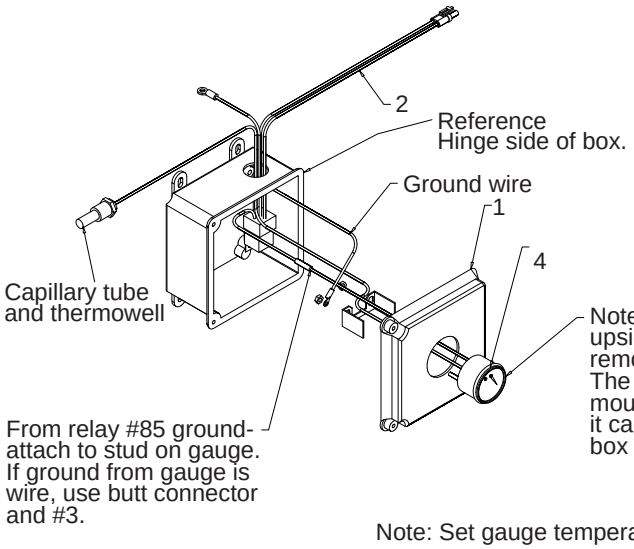
USED MARCH 2000 TO PRED021073.

FLR ASM-1/2”-(51715846) (1999 THROUGH 2/14/00)

1.	70048015	GAUGE 300PSI AIR CTR-MNT	1
2.	70048036	GAUGE 300PSI AIR BTM-MNT	1
3.	70073439	SEP/REG/OILER ASM	1
4.	72531812	REDUCER BUSHING 1/2-1/4NPT	1
5.	70141473	MTG BRACKET	2
6.	72533022	PIPE NIPPLE 1/2NPT X CLOSE	1
7.	72531133	STREET ELBOW 1/2NPT 90°	2
8.	72053612	TEE 1/2NPT	1
9.	72060004	CAP SCR 1/4-20X1 HHGR5	4
10.	72062104	NUT 1/4-20 LOCK	4
11.	72063001	WASHER 1/4 WRT	8
12.	72531547	BARB NIPPLE 1/2MPT 3/4HOSE	3
13.	72531131	STREET ELBOW 1/4NPT 90°	1
14.	72053522	STREET ELBOW 1/2NPT 45°	1



EFFECTIVE FROM PREDATOR SERIAL NUMBERS PRED991001 TO 2/14/00.



GAUGE SWITCH KIT (70733444)

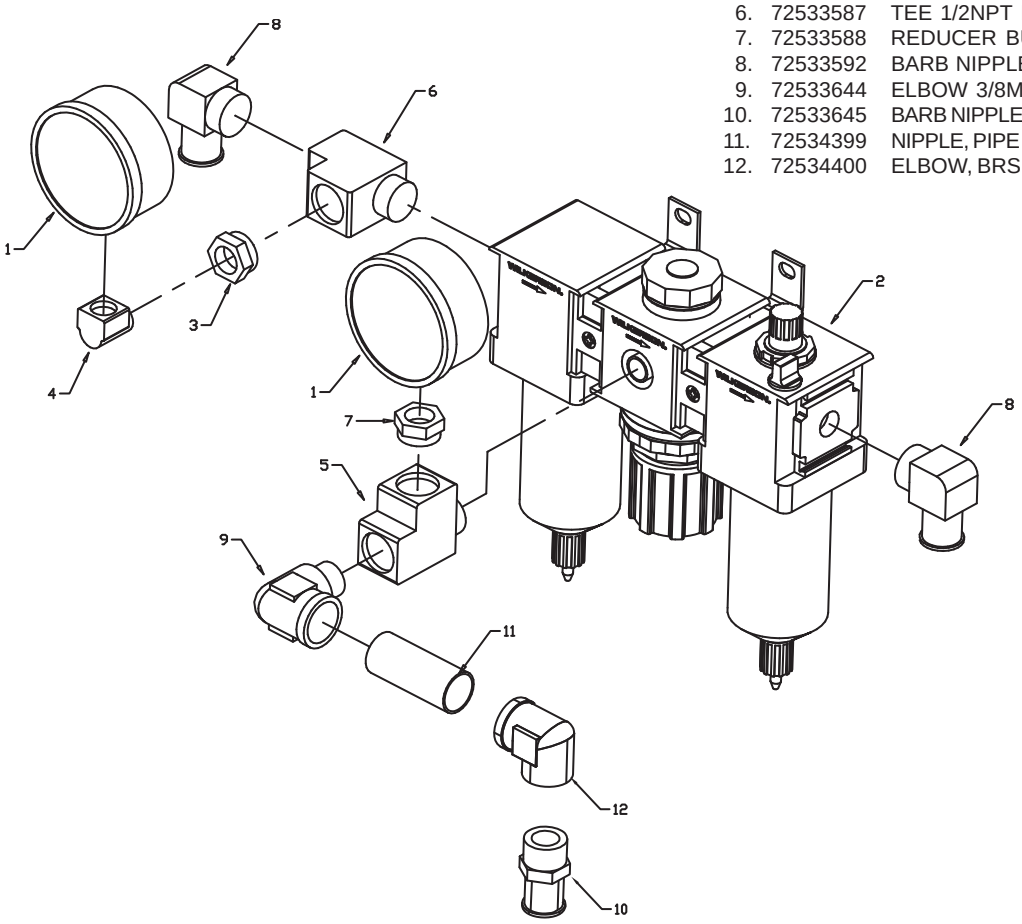
1.	77044943	BOX	1
2.	77044944	HARNESS	1
3.	70145421	HEAT SHRINK	.16FT
4.	300076004	SWITCH GAUGE	1
5.	975505110	HOSE ASM .50 X 110 SXE	1
6.	72060004	CAP SCREW .25-20 X 1.00	4
7.	72062104	NUT .25-20 HEX NYLOC ZINC	4

Note: Set gauge temperature to 240 .

CONTINUED ON FOLLOWING PAGE

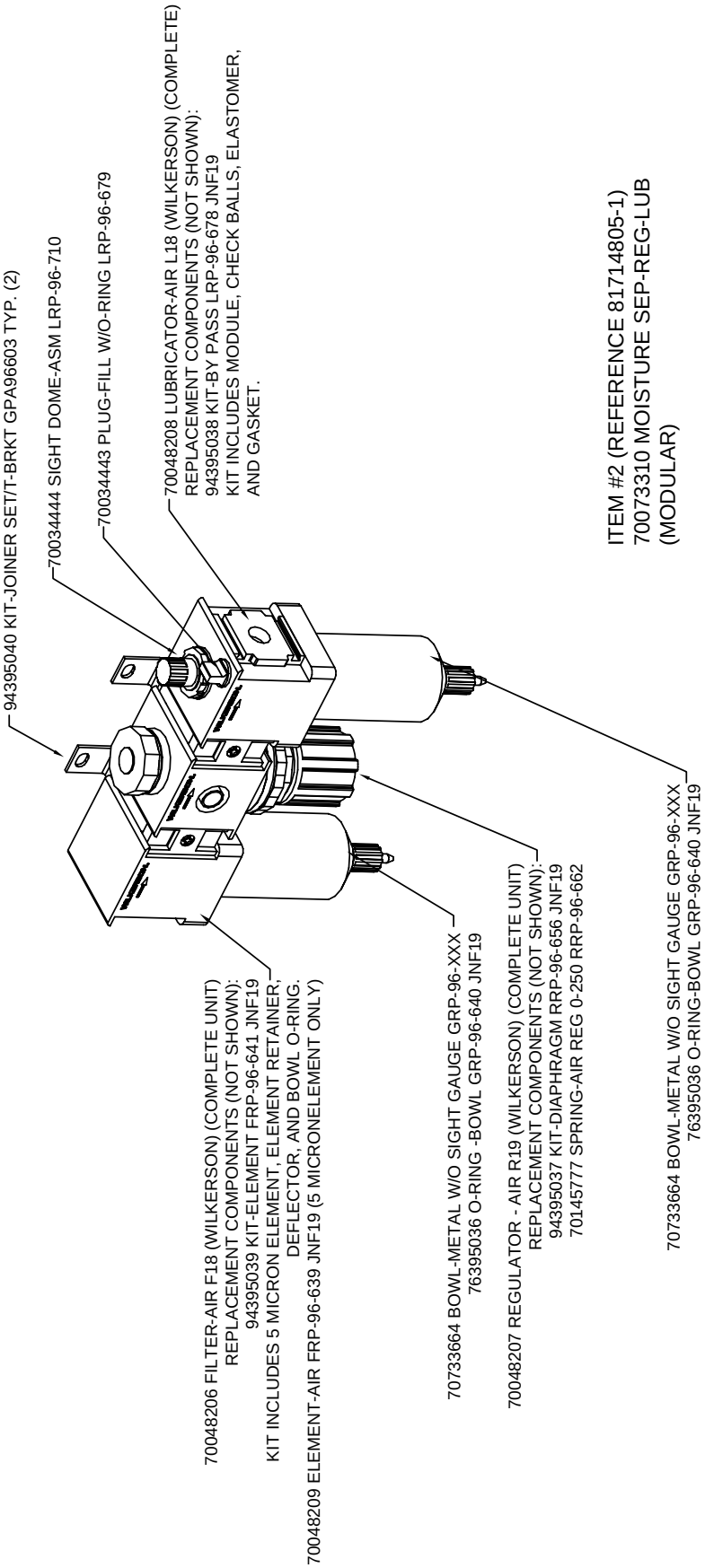
FLR ASM-1/2" (51715850-1) (EFF 2/14/00)

1.	70048205	GAUGE-AIR PRESSURE 300PSI	2
2.	70073310	MOISTURE SEP/REG/LUBE	1
3.	72531812	REDUCER BUSHING 1/2-1/4NPT	1
4.	72532974	STREET ELBOW 1/4NPT 90° SHORT	1
5.	72533586	TEE 3/8NPT RUN	1
6.	72533587	TEE 1/2NPT RUN	1
7.	72533588	REDUCER BUSHING 3/8-1/4NPT	1
8.	72533592	BARB NIPPLE 1/2MPT 3/4HOSE 90°	2
9.	72533644	ELBOW 3/8MPT 1/2FPT	1
10.	72533645	BARB NIPPLE 1/2MPT 3/4HOSE	1
11.	72534399	NIPPLE, PIPE BRS 1/2 X 2	1
12.	72534400	ELBOW, BRS 1/2 FPT X 1/2 FPT X 90°	1



GAUGE SWITCH KIT - SERIAL NUMBERS PRED991001 TO PRED021073.
FLR ASM EFFECTIVE 2/14/00 TO PRESENT.

FLR ASM-1/2” (51715850-2)(EFF 2/14/00)



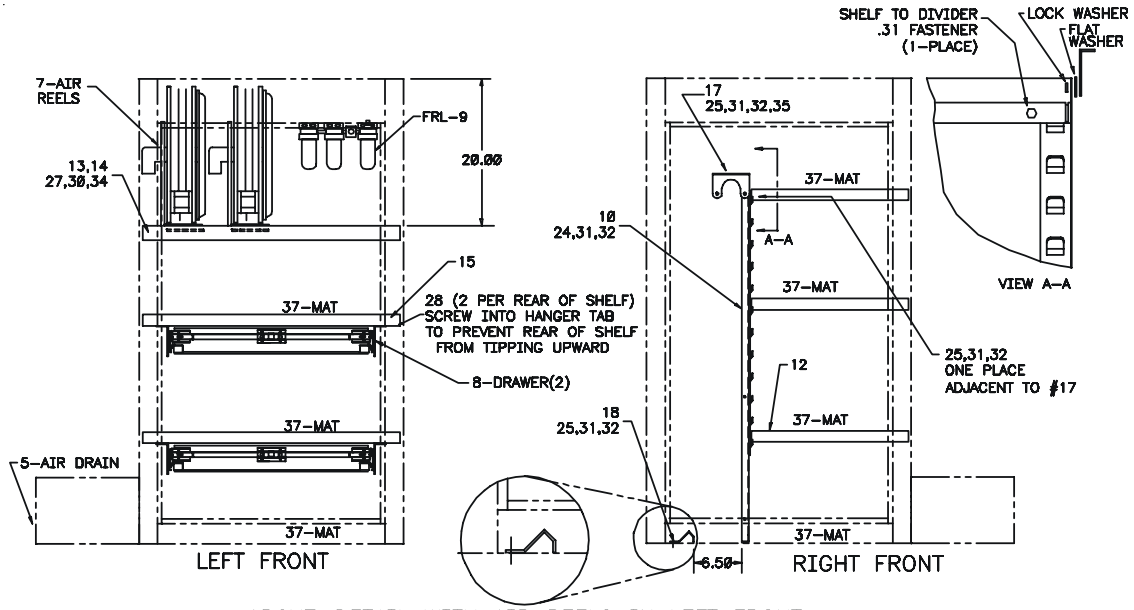
EFFECTIVE FROM 2/14/00 TO PRESENT.

BODY DETAILS (225PRED1-1) (1999 THROUGH PRESENT)

1.	VP6160D	KIT-PREVENTIVE MAINTENANCE	1
2.	31714908	KIT-CAB CADDY	1
3.	41715886	PANEL ASM (2000-9/02)	1
	41715847	PANEL ASM (1999)	
4.	51706132	SIDE RAIL	1
5.	51709358	DRAIN ASM	1
6.	51715371	BODY ASM W/CRANE	1
7.	51715807	KIT-HOSE REEL (2)	1
8.	51715842	DRAWER ASM	2
9.	51715846	FLR-1/2"	1
10.	52715818	DIVIDER	1
11.	60030309	WEAR PAD	2
12.	60121842	SHELF-ADJ 17X21-3/8	3
13.	60122138	CHANNEL	1
14.	60122216	ANGLE	2
15.	60122217	SHELF-ADJ 18-3/4X35-1/4	2
17.	60122241	BRACKET-STOP	1
18.	60122242	DIVIDER	1
19.	60250360	PANEL	1
20.	60250732	DIVIDER-JACK BOX	1

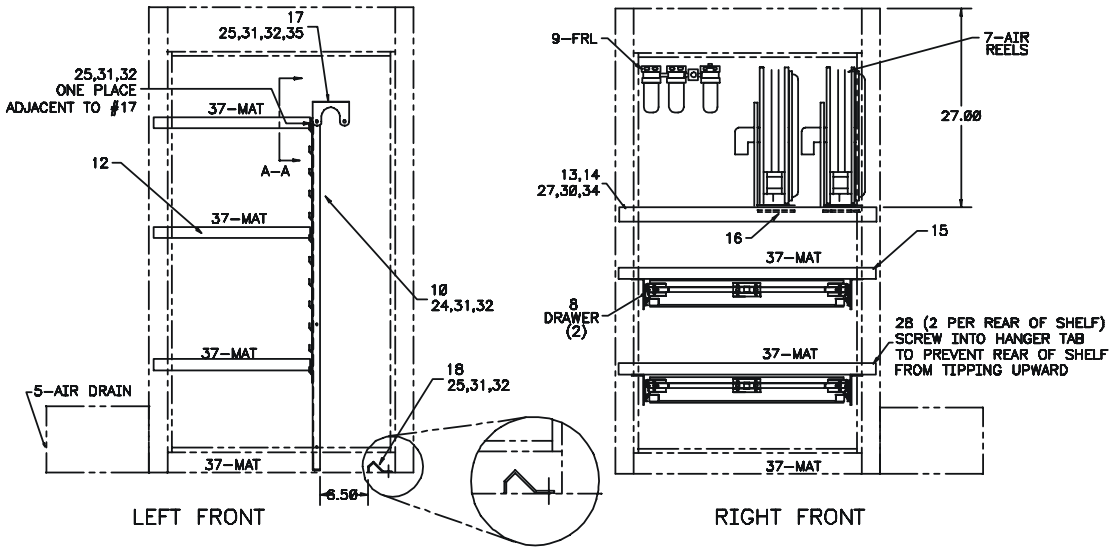
CONTINUED ON FOLLOWING PAGE

21.	660247	VIDEO-INSERVICE	1
22.	70733154	LOADGATE	1
23.	70733305	DELECTOR-BUG	1
24.	72060023	CAP SCR 5/16-18X3/4 HHGR5	4
25.	72060025	CAP SCR 5/16-18X1 HHGR5	8
26.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	21
27.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	8
28.	72061099	SCR-TEK #10-16X5/8 HWH	4
29.	72062103	NUT 3/8-16 HEX LOCK	21
30.	72062080	NUT 1/2-13 HEX LOCK	10
31.	72062109	NUT 5/16-18 HEX LOCK	18
32.	72063002	WASHER 5/16 WRT	27
33.	72063003	WASHER 3/8 WRT	42
34.	72063005	WASHER 1/2 WRT	20
35.	72063050	WASHER 5/16 LOCK	1
36.	72066349	POP RIVET 3/16X1/2GRIP	14
37.	76393340	MAT-RUBBER	25'
38.	92091010	ICC SAFETY KIT & FIRE EXT	1
39.	93029608	RUNNING BOARD (was 93029598)	1
40.	93715374	INSTALLATION KIT-8511 W/CRANE	1
41.	99903154	MANUAL-LOADGATE EDL 16-86	1
42.	72066580	CLAMP	4
43.	72060027	CAP SCR 5/16-18X1-1/2 HHGR5	6
44.	72063053	WASHER 1/2 LOCK	2
45.	72060095	CAP SCR 1/2-13X2 HHGR5	2



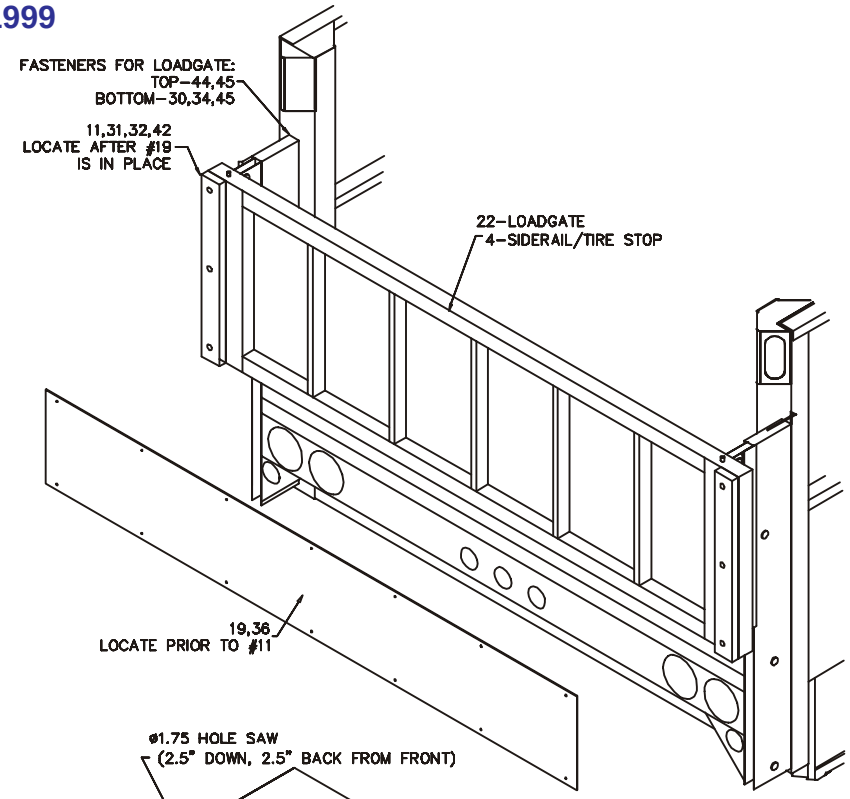
ABOVE—DETAIL WITH AIR REELS IN LEFT FRONT

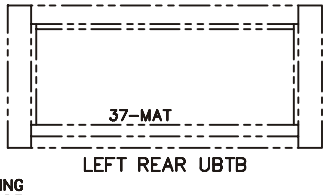
BELOW—DETAIL WITH AIR REELS IN RIGHT FRONT

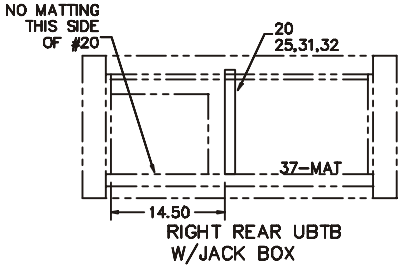


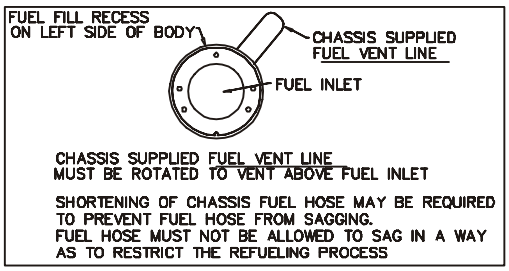
SERIAL NUMBERS PRED991001 TO PRESENT.

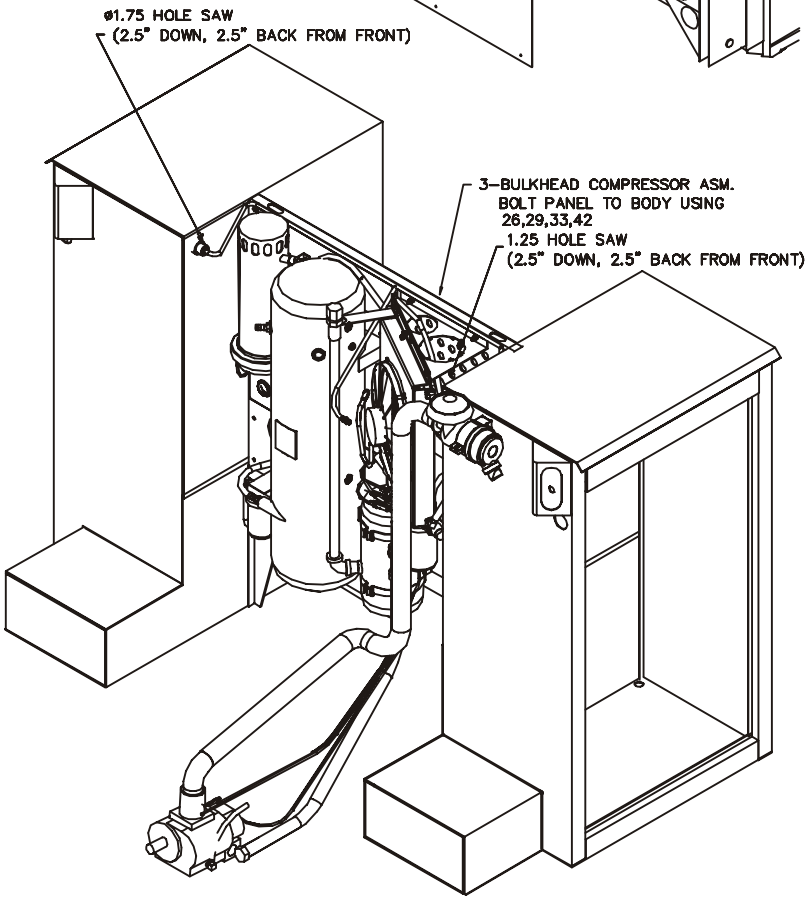
BODY DETAILS (225PRED1-2) (1999 THROUGH PRED021073)









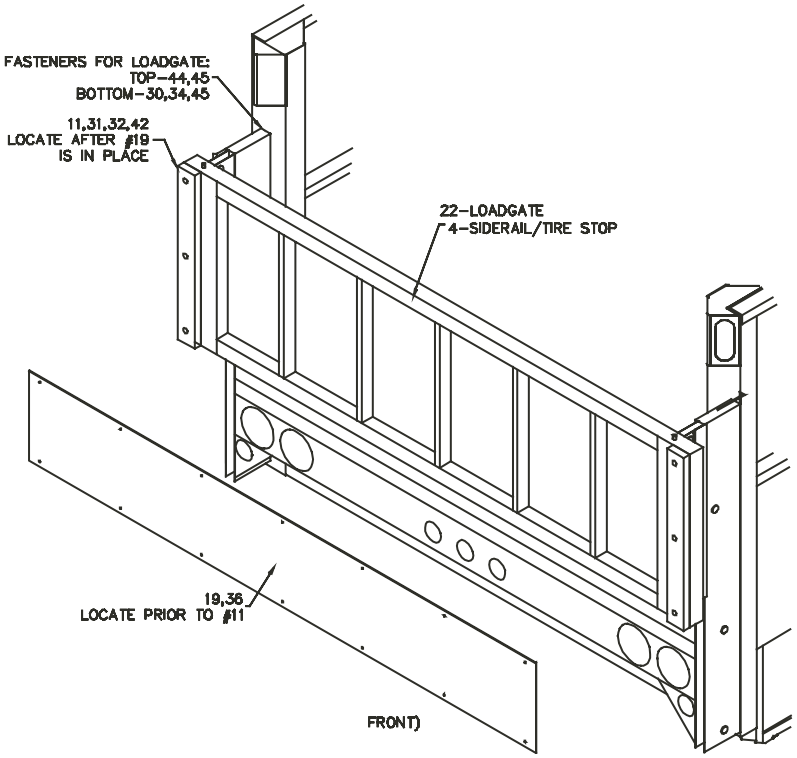


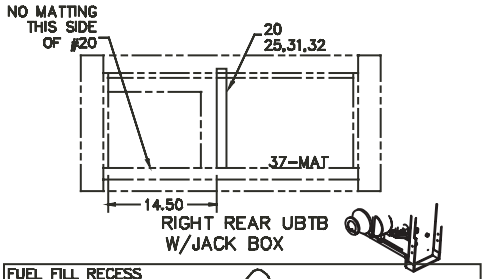
PARTS NOT SHOWN:
1–PM KIT (SHIP LOOSE WITH UNIT)
2–CAB CADDY (INSTALL BEHIND SEAT IN CAB)
21–INSERVICE VIDEO (SHIP IN CAB)
23–BUG DEFLECTOR (INSTALLED ON HOOD OF CAB)
38–ICC SAFTY KIT (SHIP LOOSE WITH UNIT)
39–RUNNING BOARDS (INSTALL ON SIDES OF CAB)
40–INSTALL KIT (USED TO FASTEN BODY TO CHASSIS)
41–MANUAL (SHIP LOOSE WITH UNIT)

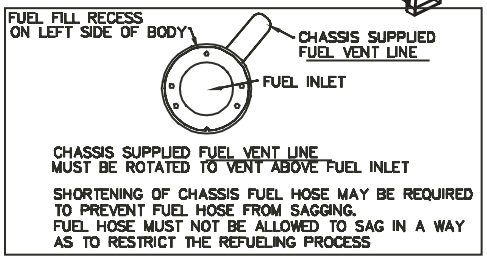
NOTE: IN 1999, WITH THE 41715841 PANEL, THE AIR INTAKE WAS LOCATED ON THE OTHER SIDE OF THE BODY. HOSE WAS CONNECTED TO AIR INTAKE. NEW CONFIGURATION INTRODUCED IN 2000.

SERIAL NUMBERS PRED991001 TO PRED021073.

BODY DETAILS (225PRED1-2)







PARTS NOT SHOWN:
1–PM KIT (SHIP LOOSE WITH UNIT)
2–CAB CADDY (INSTALL BEHIND SEAT IN CAB)
21–INSERVICE VIDEO (SHIP IN CAB)
23–BUG DEFLECTOR (INSTALLED ON HOOD OF CAB)
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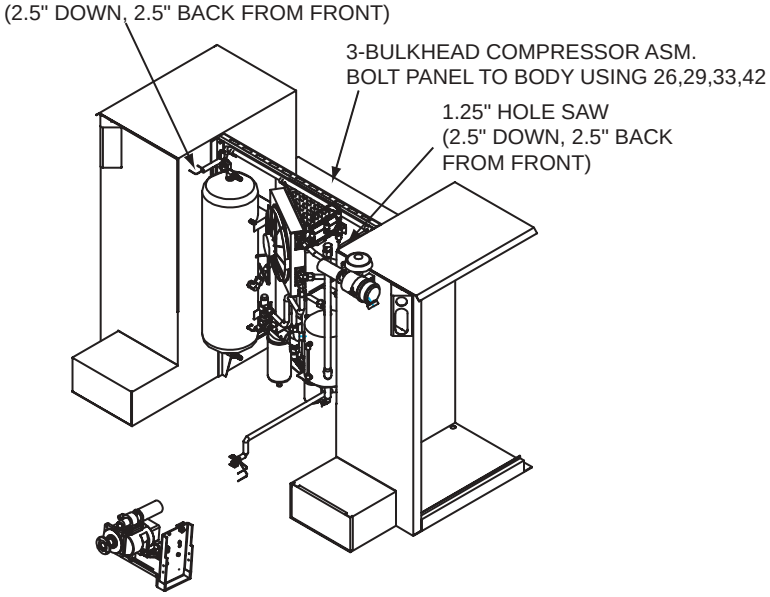
39–RUNNING BOARDS (INSTALL ON SIDES OF CAB)
40–INSTALL KIT (USED TO FASTEN BODY TO CHASSIS)
41–MANUAL (SHIP LOOSE WITH UNIT)

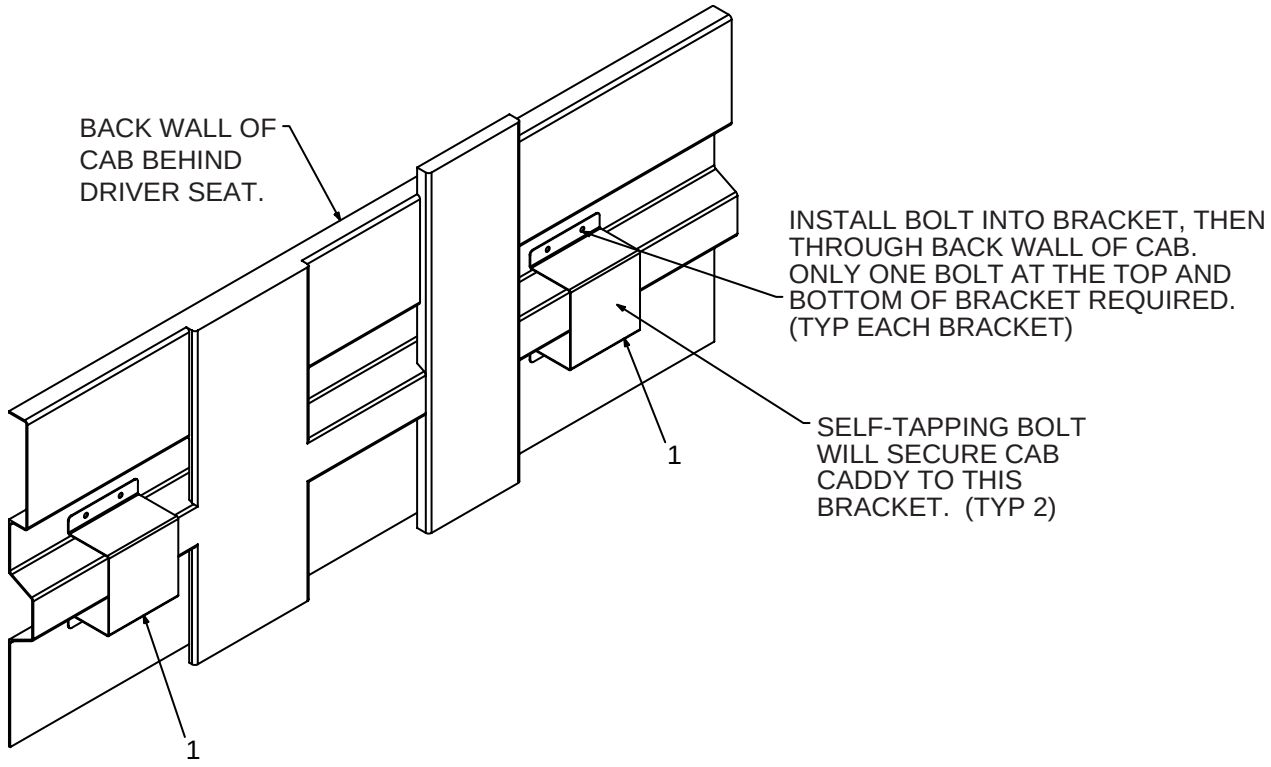


SERIAL NUMBERS PRED021074 TO PRESENT.

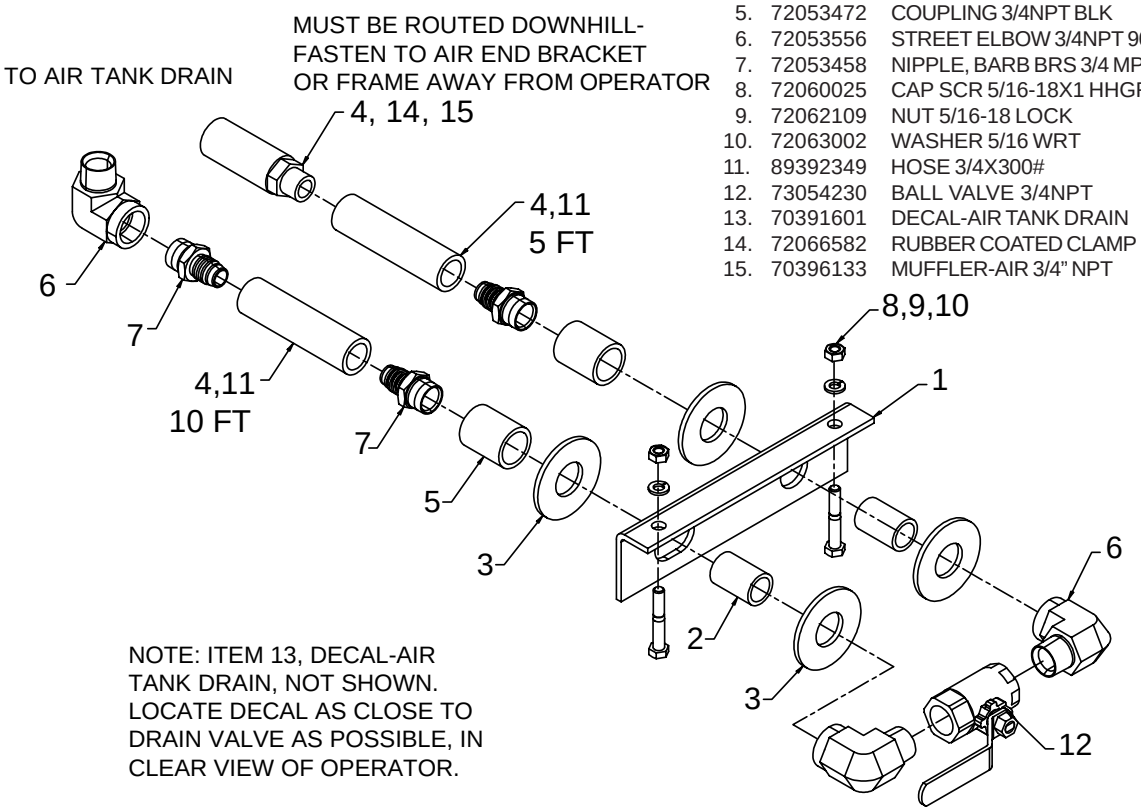
CAB CADDY ASSEMBLY BRACKETS (99904243)

(FOR FORD F-350-550, 2007 AND NEWER ONLY)

1. 60131663 BRACKET-CAB CADDY 2



AIR TANK DRAIN ASM - 8511 (52715970)

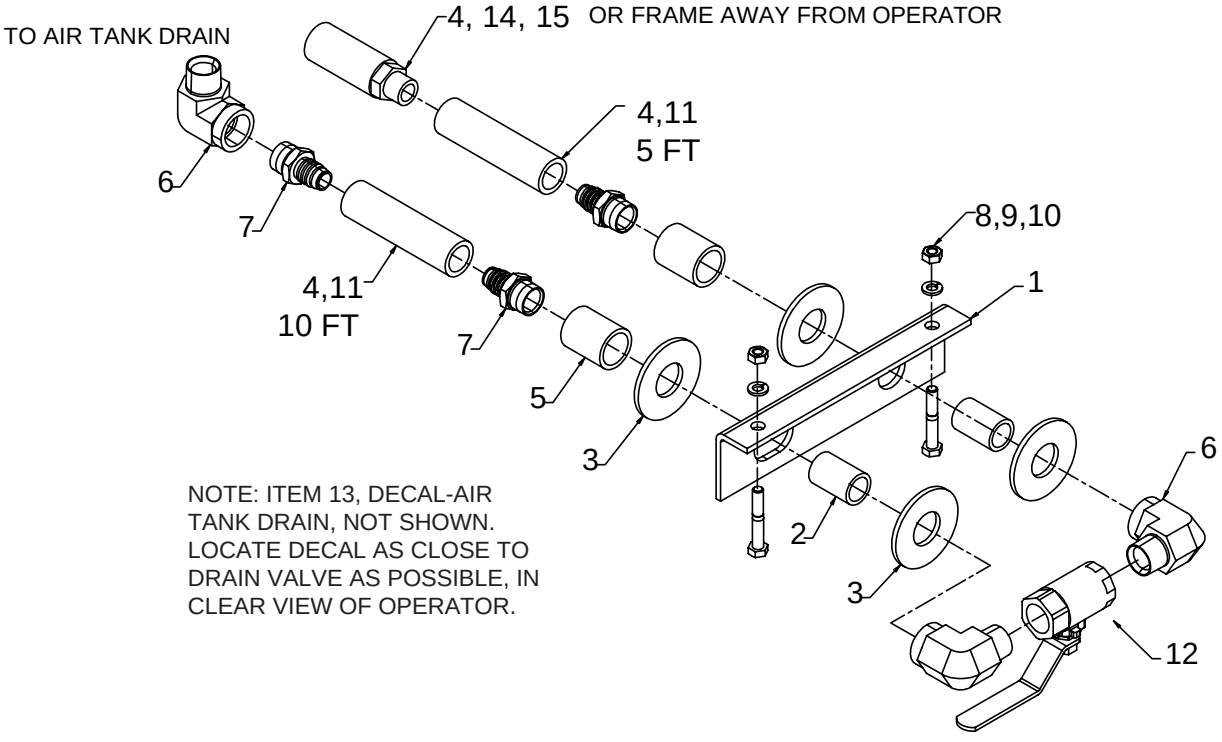


NOTE: ITEM 13, DECAL-AIR TANK DRAIN, NOT SHOWN. LOCATE DECAL AS CLOSE TO DRAIN VALVE AS POSSIBLE, IN CLEAR VIEW OF OPERATOR.

PARTS LIST - 8511 & 8513

1.	60116097	MTG BRACKET	1
2.	72053141	PIPE NIPPLE 3/4NPT X CLOSE	2
3.	72063066	WASHER 1 FLAT (AS REQD)	4
4.	72661657	CLAMP-HOSE .75 STEPLESS EAR (WAS 72066000)	4
5.	72053472	COUPLING 3/4NPT BLK	2
6.	72053556	STREET ELBOW 3/4NPT 90°	3
7.	72053458	NIPPLE, BARB BRS 3/4 MPT	3
8.	72060025	CAP SCR 5/16-18X1 HHGR5	2
9.	72062109	NUT 5/16-18 LOCK	2
10.	72063002	WASHER 5/16 WRT	2
11.	89392349	HOSE 3/4X300#	15FT
12.	73054230	BALL VALVE 3/4NPT	1
13.	70391601	DECAL-AIR TANK DRAIN	1
14.	72066582	RUBBER COATED CLAMP	1
15.	70396133	MUFFLER-AIR 3/4" NPT	1

AIR TANK DRAIN ASM - 8513 (52717633)

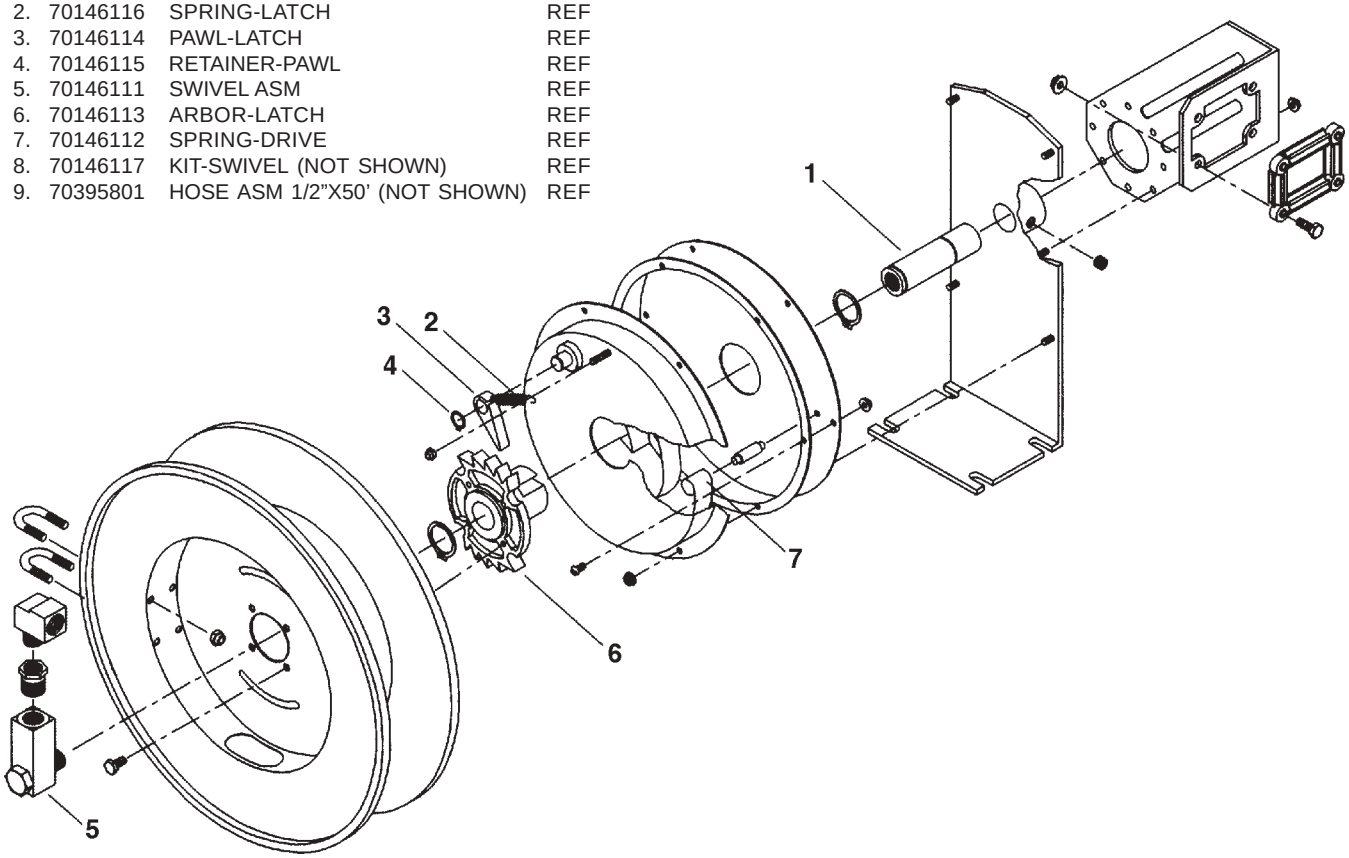


NOTE: ITEM 13, DECAL-AIR TANK DRAIN, NOT SHOWN. LOCATE DECAL AS CLOSE TO DRAIN VALVE AS POSSIBLE, IN CLEAR VIEW OF OPERATOR.

SERIAL NUMBERS PRED991001 TO PRESENT.

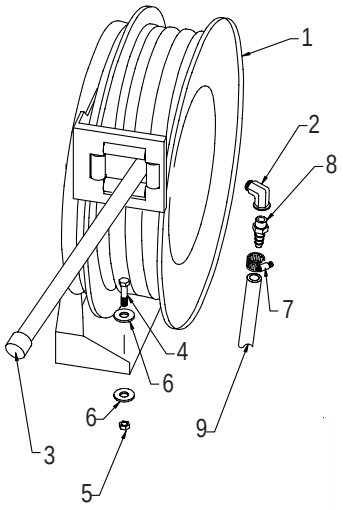
HOSE REEL ASM (70733408) (1999 THROUGH 9/02)

1.	70146110	SHAFT-INLET	REF
2.	70146116	SPRING-LATCH	REF
3.	70146114	PAWL-LATCH	REF
4.	70146115	RETAINER-PAWL	REF
5.	70146111	SWIVEL ASM	REF
6.	70146113	ARBOR-LATCH	REF
7.	70146112	SPRING-DRIVE	REF
8.	70146117	KIT-SWIVEL (NOT SHOWN)	REF
9.	70395801	HOSE ASM 1/2"X50' (NOT SHOWN)	REF



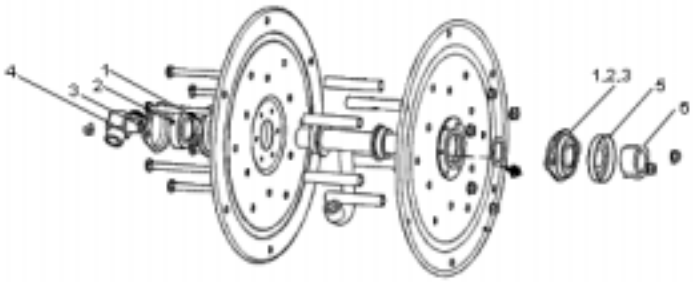
NOTE:

HOSE REEL KIT 51706347 EFFECTIVE 5-1-03 THRU 5-28-03. 70733731 AND 70733732 ARE EFFECTIVE BEFORE 5-1-03 AND AFTER 5-28-03.



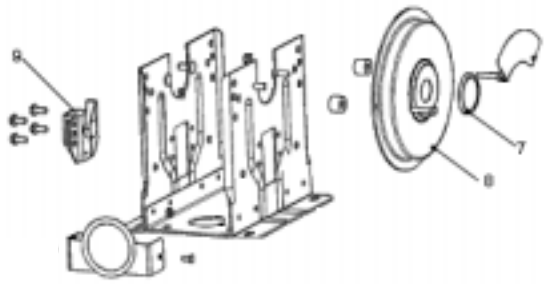
HOSE REEL KIT-1/2 X 50' HOSE (51706347) (EFF. 5-1-03 THRU 5-28-03)

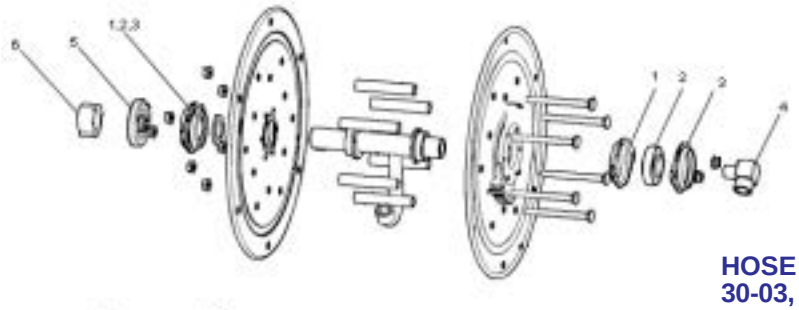
1.	70732095	HOSE REEL	1
2.	72531133	STREET ELBOW 1/2X90°	1
3.	72053810	PIPE CAP 1/2NPT	1
4.	72060046	CAP SCR 3/8-16X1 HHGR5	4
5.	72062103	NUT 3/8-16 LOCK	4
6.	72063003	WASHER 3/8 WRT	8
7.	72066000	HOSE CLAMP	2
8.	72051547	BARB NIPPLE 1/2MPT 3/4HOSE	2
9.	89392349	HOSE 3/4 300#	36"

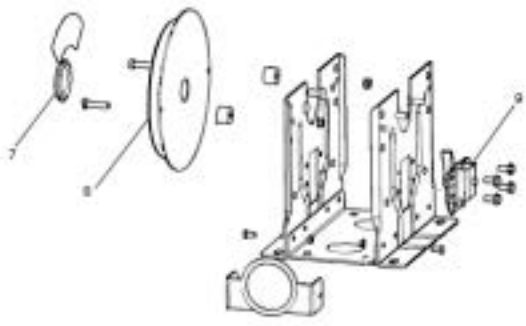


HOSE REEL - CURB SIDE (70733731) (THRU 4-30-03, AFTER 5-28-03)

1.		BRNG HOLD, SELF-ALIGN (SLOT)	2
2.		BRNG INSERT, SELF-ALIGN	2
3.		BRNG HOLDER, SELF-ALIGN	2
4.		SWIVEL JOINT, MXF 1/2" 90°	1
5.		CAP-PLUG, SPRING (INNER)	1
6.		SPRING ARBOR, NARROW	1
7.		CAP-PLUG, SPRING (OUTER)	1
8.	71410225	LEFT SPRING MOTOR	1
9.		RATCHET PAWL ASM	1







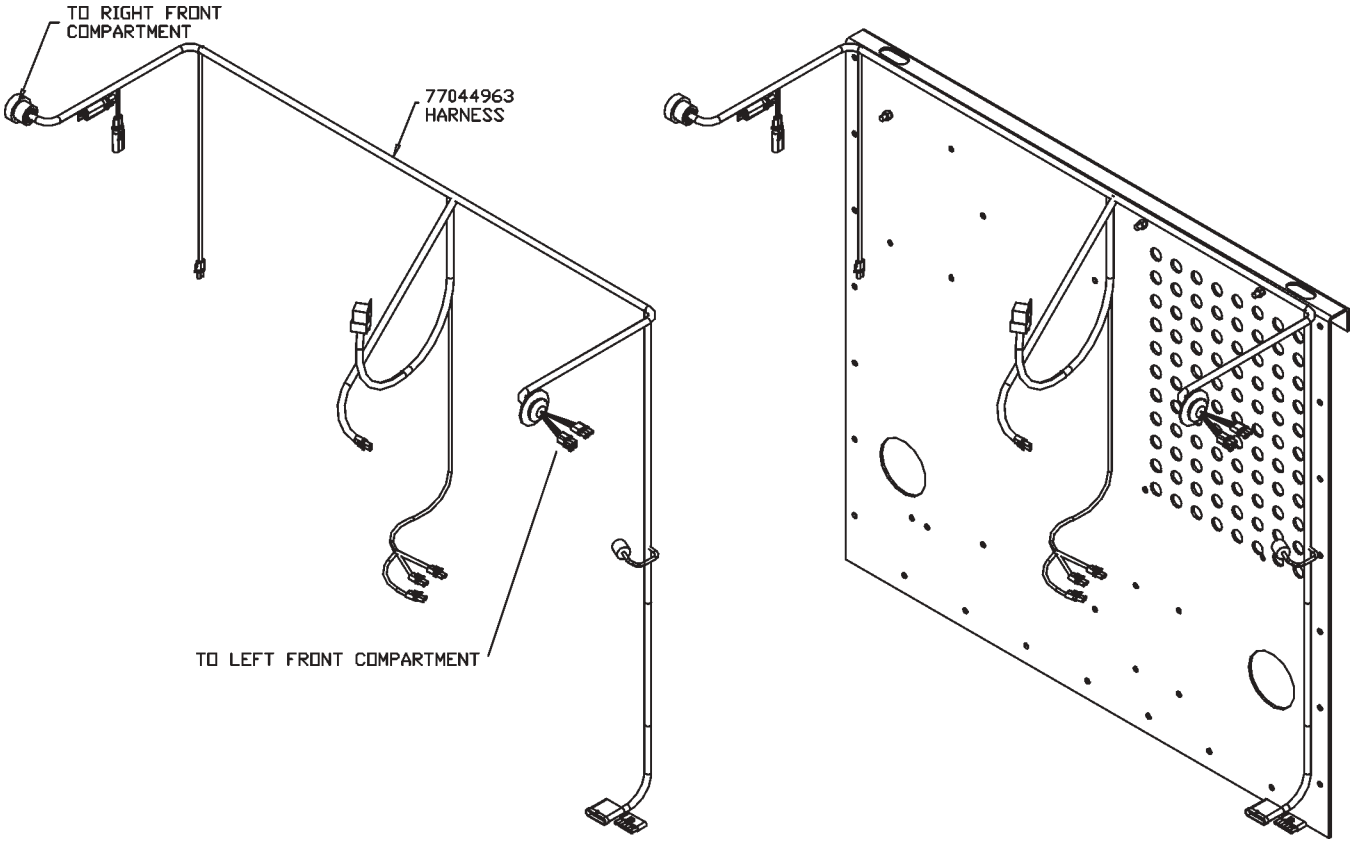
HOSE REEL - STREET SIDE (70733732) (THRU 4-30-03, AFTER 5-28-03)

1.		BRNG HOLD, SELF-ALIGN (SLOT)	2
2.		BRNG INSERT, SELF-ALIGN	2
3.		BRNG HOLDER, SELF-ALIGN	2
4.		SWIVEL JOINT, MXF 1/2" 90°	1
5.		CAP-PLUG, SPRING (INNER)	1
6.		SPRING ARBOR, NARROW	1
7.		CAP-PLUG, SPRING (OUTER)	1
8.	71410226	LEFT SPRING MOTOR	1
9.		RATCHET PAWL ASM	1

SERIAL NUMBERS PRED021072, PRED021073, AND PRED021077 TO PRESENT.

PANEL ASM (41715887) (THRU 9/02)

1.	60250718	PANEL	1
2.	77044962	HARNESS	1
3.	72066526	HOSE CLAMP	3
4.	72060046	CAP SCR 3/8-16X1 HHGR5	3
5.	72062103	NUT 3/8-16 LOCK	3

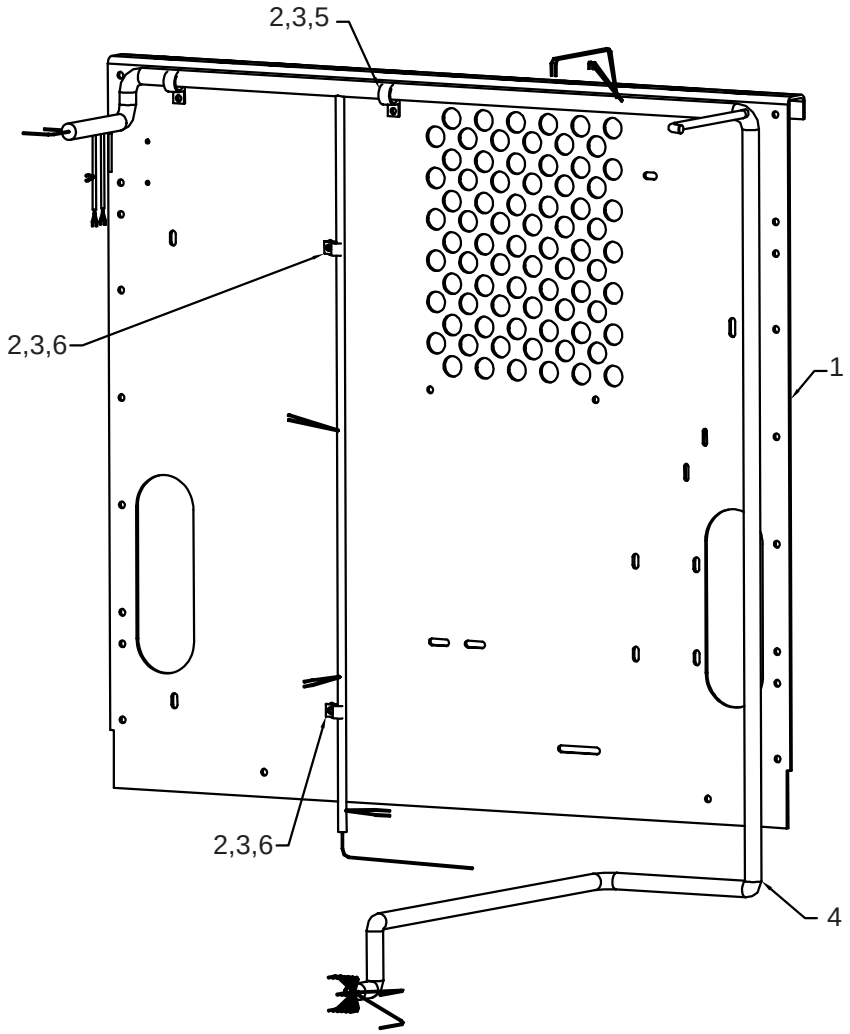


SERIAL NUMBERS PRED991001 TO PRED021073.

PANEL ASM (51717813) (EFF. 9/02)

1.	60124207	PANEL-COMPRESSOR MOUNT	1
2.	72060046	CAP SCR 3/8-16 X 1.00 HH GR5	7
3.	72062103	NUT 3/8-16 HEX NYLOC	7
4.	77045896	HARNESS-AIR SYSTEM	1
5.	72066581	CLAMP-UMP20 S464 G16	5
6.	72661312	CLAMP-1/2 LOOP CUSHIONED	2
7.	77044676	PLUG-PKRD WP/MP PLUG	21
8.	77040441	CONN-PKRD MP 2802 CAV FEMALE	3
9.	77044574	CONN-PKRD WP 2CAV FEM TOWER	3
10.	77044573	CONN-PKRD WP 2CAV MALE/SHROUD	1
11.	77045885	CONN-PKRD MP 280 7 CAV MALE	1

PARTS 7 THROUGH 11 USED TO PLUG CONNECTORS ON HARNESS (#4).



SERIAL NUMBERS PRED021074 TO PRESENT.

EAR CLAMP INSTALLATION (99904411)

INSTALLING A STEPLESS EAR CLAMP	
When there is sufficient room, use standard jaw pincers to position a properly-sized ear clamp on a hose fitted with a hose stem. Close ear clamp fully with uniform force until there is only a 1/16" gap remaining. The visible deformation of the clamp ear provides a visible, instant check that the closure is complete.	
INSTALLING A STEPLESS EAR CLAMP IN RESTRICTED SPACE	
When space is restricted, use side jaw pincers held parallel to the hose to position and clamp a properly-sized ear clamp on a hose fitted with a hose stem. Close ear clamp fully with uniform force until there is only a 1/16" gap remaining. The visible deformation of the clamp ear provides a visible, instant check that the closure is complete.	
REMOVING A STEPLESS EAR CLAMP	
To remove a stepless ear clamp, grasp the strip end with a pincer and pull it away.	
NOTE: Stepless ear clamps can only be used once. When removed, they must be discarded and replaced with new clamps.	

SECTION 3A. PTO AIR COMPRESSOR (20040)

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SPECIFICATIONS

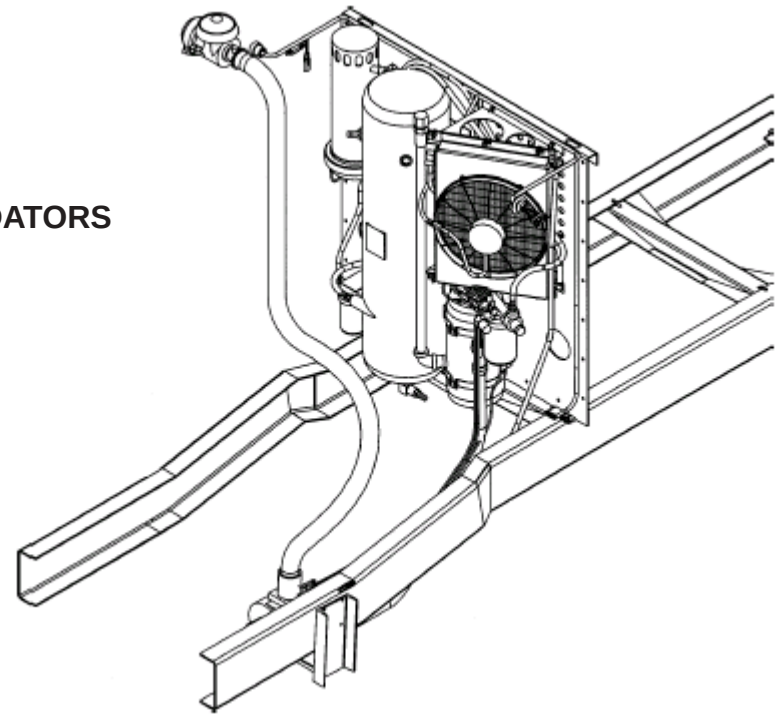
IMT PREDATOR PTO AIR COMPRESSOR

DELIVERY @ 175 PSIG	45 CFM @ 110 PSI TO 175 PSI
INPUT SPEED RPM TO COMPRESSOR PUMP	2250 RPM
FLUID CAPACITY	1.5 GALLONS
COMPRESSOR / AIR INLET	9”W X 10.5”H X 13.25”L
RECEIVER / SUMP	8” X 18” VERTICAL
SPIN-ON COALESCER FILTER	5” DIA
COOLER / FAN ASSEMBLY	16.25” X 22.00” X 2.25”
WEIGHT (DRY)	280 LB
OIL COOLER FAN	12VDC, 22 AMP, 500 CFM @ 1/2” H20
AFTER COOLER FAN	12VDC, 330 CFM, WATERPROOF
AIR TANK	24 GALLONS
OIL FILTER	10 MICRON

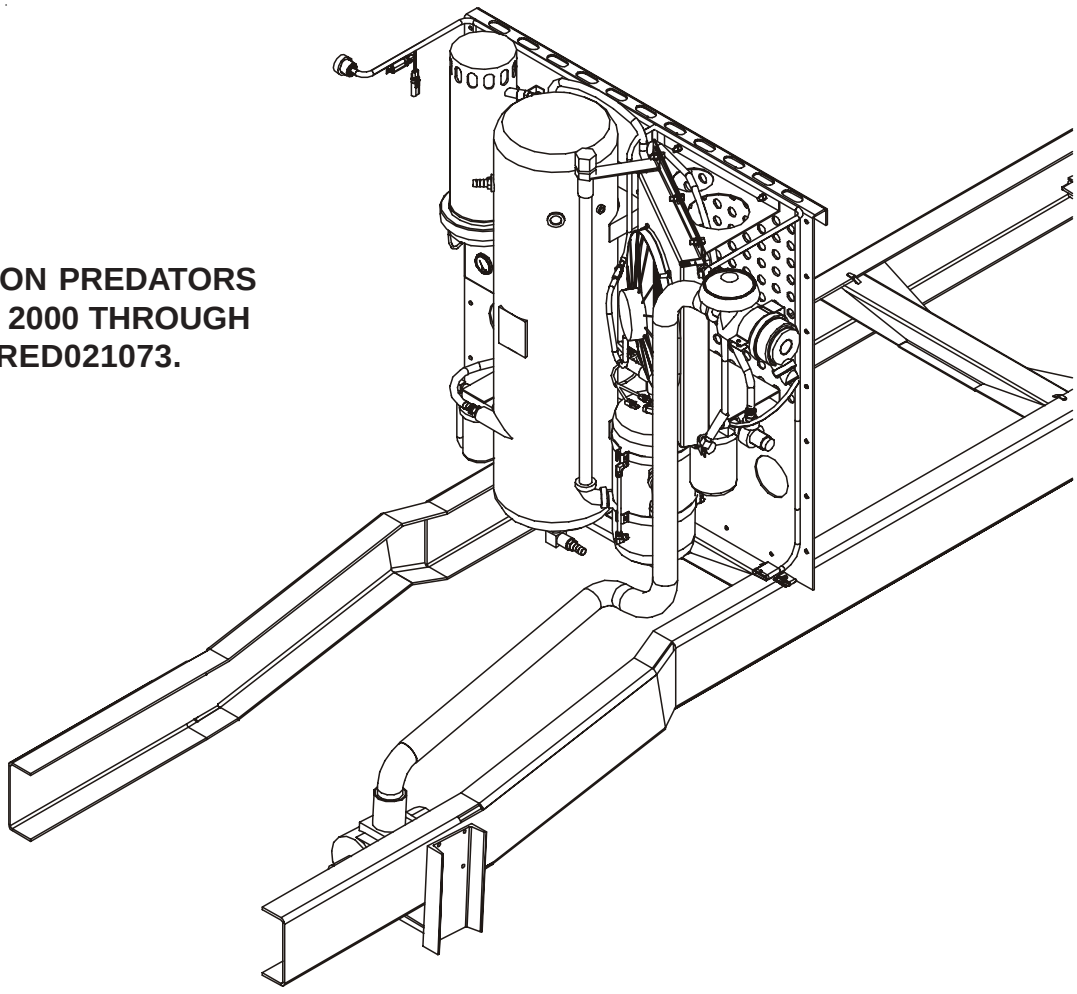
Specifications subject to change without prior notice

TYPICAL INSTALLATION

USED ON PREDATORS IN 1999.



USED ON PREDATORS FROM 2000 THROUGH PRED021073.



USED ON PREDATORS FROM 2000 THROUGH PRED021073.

CONTINUED

SAFETY INFORMATION

WARNING

All units are shipped with a detailed operators and parts manual. This manual contains vital information for the safe use and efficient operation of the unit. Carefully read the operators manual before starting the unit. Failure to adhere to the instructions could result in serious bodily injury or property damage.

AIR COMPRESSOR SAFETY PRECAUTIONS

Safety is basically common sense. While there are standard safety rules, each situation has its own peculiarities that cannot always be covered by rules. There fore with your experience and common sense, you are in a position to ensure your safety. Lack of attention to safety can result in: accidents, personal injury, reduction of efficiency and worst of all - Loss of Life. Watch for safety hazards. Correct them promptly. Use the following safety precautions as a general guide to safe operation.

Do not attempt to remove any compressor parts without first relieving the entire system of pressure.

DANGER

This compressor system is equipped with an air storage tank that remains pressurized even when the compressor is off. Relieve air storage tank pressure when servicing compressor or when not in use.

Do not attempt to service any part while machine is operating.

DANGER

Check the compressor sump oil level only when the compressor is not operating and system is completely relieved of pressure. Open service valve to ensure relief of system air pressure when performing maintenance on compressor air/oil system. Failure to comply with this warning may cause damage to property and serious bodily harm.

Do not operate the compressor at pressure or speed in excess of its rating as indicated in “Compressor Specifications”.

Periodically check all safety devices for proper operation.

Do not play with compressed air. Pressurized air can cause serious injury to personnel.

Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts by covering parts and exposed openings.

Do not install a shut-off valve between the compressor and compressor oil sump.

DANGER

Do not use IMT compressor systems to provide breathing air. Such usage, whether supplied immediately from the compressor source, or supplied to breathing tanks for subsequent use, can cause serious bodily injury.

IMT disclaims any and all liabilities for damage for loss due to personal injuries, including death, and/or property damage including consequential damages arising out of any IMT compressor used to supply breathing air.

Do not disconnect or bypass safety circuit system.

Do not install safety devices other than authorized IMT replacement devices.

Close all openings and replace all covers and guards before operating compressor unit.

Tools, rags, or loose parts must not be left on the compressor drive parts.

Do not use flammable solvents for cleaning parts.

Keep combustibles out of and away from the compressor and any associated enclosures.

CONTINUED ON NEXT PAGE

CONTINUED

AIR COMPRESSOR SAFETY PRECAUTIONS

The owner, lessor, or operator of the compressor are hereby notified and forewarned that any failure to observe these safety precautions may result in damage or injury.

IMT expressly disclaims responsibility or liability for any injury or damage caused by failure to observe these specified precautions or by failure to exercise ordinary caution and due care required when operating or handling the compressor, even though not expressly specified above.

SAFETY INFORMATION

A compliment of warning decals is supplied with each unit. These decals must be affixed to the vehicle after it has been painted, trimmed, undercoated, etc. and prior to being put into service. The decals shall be placed so as to be clearly visible to the user and service personnel. (Figures 1 through 6.)

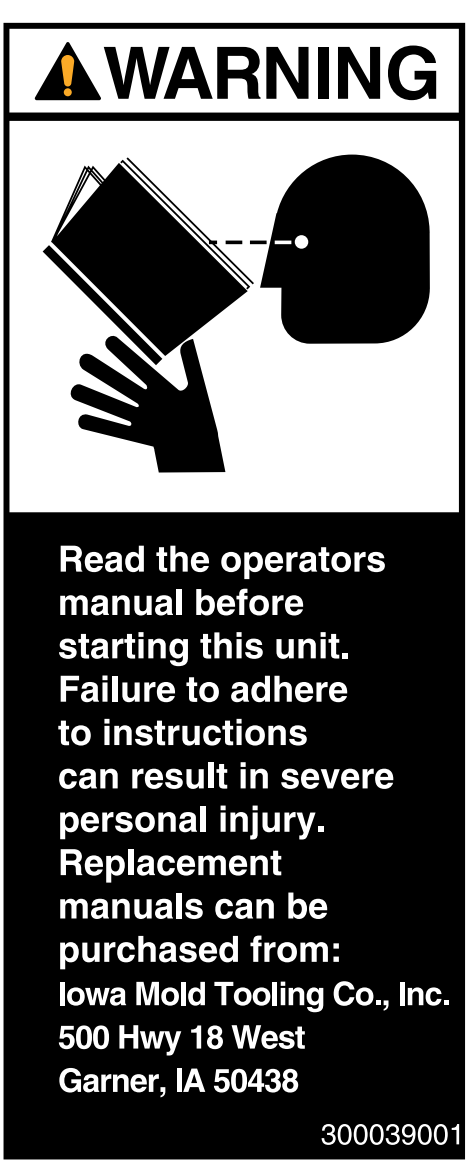


Figure 1. To be placed on visor or dash near start-up procedure decal.

Figure 2. To be placed on body near oil sump filler cap.

SAFETY INFORMATION

CONTINUED

Figure 3. To be placed on body near air service valve.

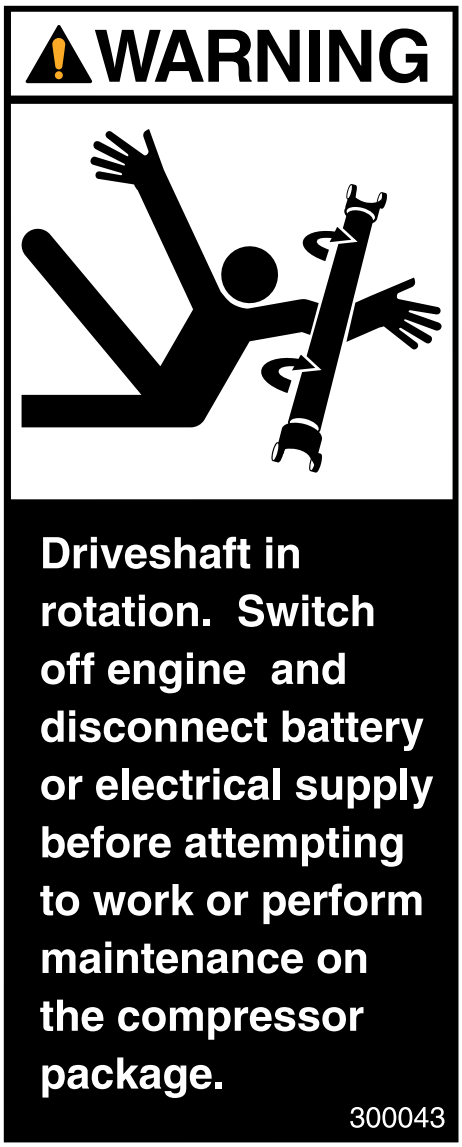


Figure 4. To be placed on body near compressor mounting foot.

SAFETY INFORMATION

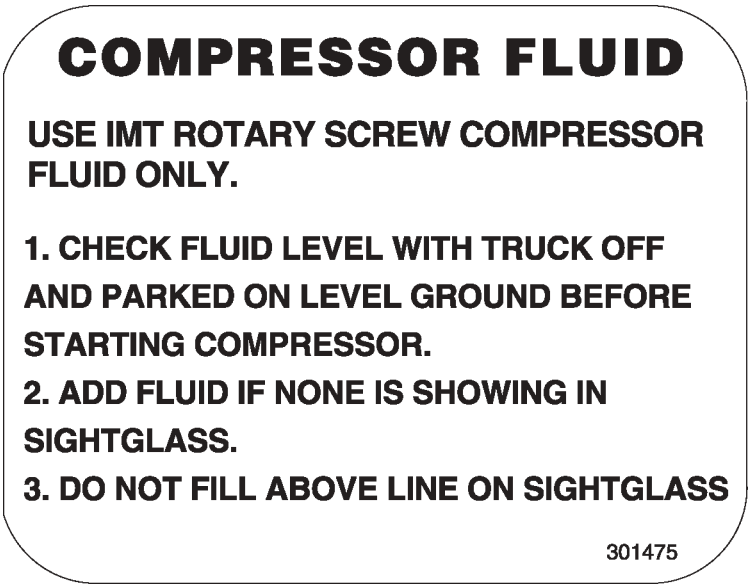


Figure 5. To be placed on body near oil sump filler cap.

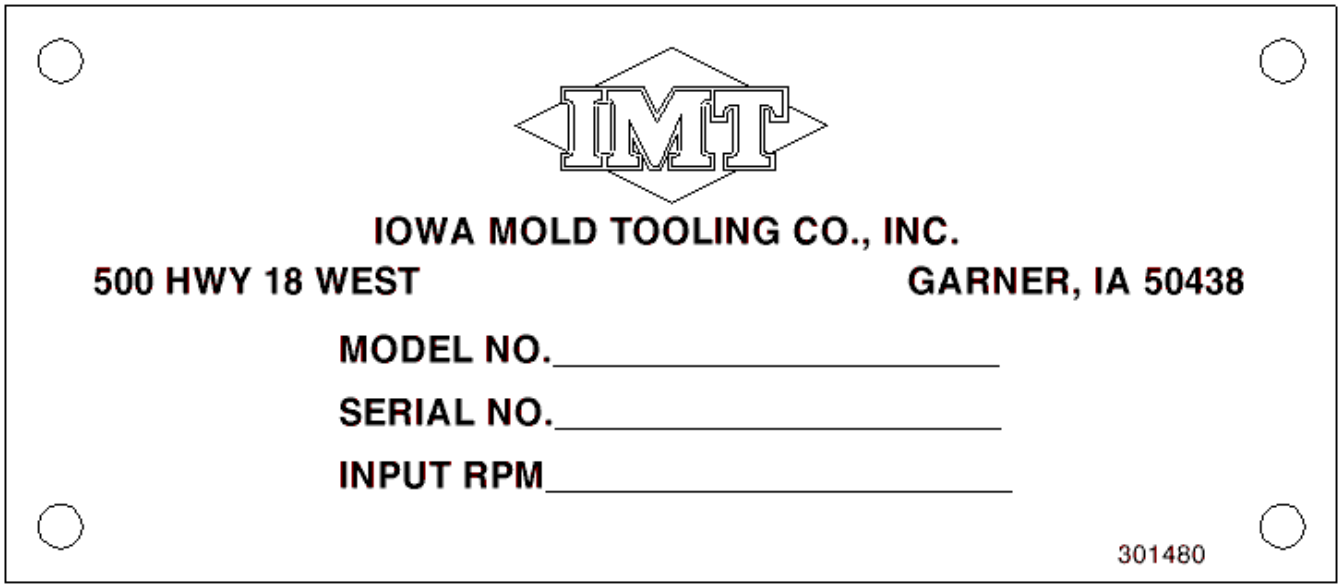


Figure 6. Serial number and name plate to be placed on door jam.

SERIAL NUMBERS PRED991001 THROUGH PRED021073.

COMPRESSOR TERMINOLOGY

ATF
Automatic transmission fluid.

AIR/OIL COALESCER
Performs second stage separation of oil from compressed air feeding air tools. Sometimes referred to as the separator element.

CFM
Refers to the volume of compressed air being produced expressed as cubic feet of air per minute.

IMT SPEED CONTROL
Sometimes referred to as the engine speed control.

OIL SUMP
The first stage of oil separation from compressed air. Also serves as reservoir area for compressor lubricant and sometimes referred to as the receiver tank.

PSI
Refers to the operating pressure at which the system is set up, expressed as pounds per square inch.

SAFETY VALVE
A valve located on the oil sump which opens in case of excessive pressure. Sometimes referred to as the pop-off or pressure relief valve.

SHUTDOWN SWITCH
Works in conjunction with a power relay, sending a signal to stop the compressor power source in cases of high temperature. Power relay incorporates an additional wire for remote engine/speed control kill.

SIDE MOUNT PTO
Power take off gearbox that bolts to the side of the transmission. The PTO input gear meshes with one of the gears in the vehicle's transmission. The rotation developed by the engine drives the transmission which turns the PTO gearbox and rotates the PTO output shaft.

DESCRIPTION OF COMPONENTS

CONTINUED

COMPRESSOR ASSEMBLY
The IMT PTO compressor assembly is a positive displacement, oil flooded, rotary screw type unit employing one stage of compression to achieve the desired pressure. Components include a housing (stator), two screws (rotors), bearings, and bearing supports. Power from the engine is transferred to the male rotor through a drive shaft and gears in the gear housing. The female rotor is driven by the male rotor. There are four lobes on the male rotor while the female rotor has five roots.

PRINCIPLES OF OPERATION
In operation, two helical grooved rotors mesh to compress air. Inlet air is trapped as the male lobes roll down the female grooves, pushing trapped air along, compressing it until it reaches the discharge port in the end of the stator and delivers smooth-flowing, pulse-free air to the receiver.

During the compression cycle, oil is injected into the compressor and serves these purposes:

1. Lubricates the rotating parts and bearings.
2. Serves as a cooling agent for the compressed air.
3. Seals the running clearances.

LUBRICATION SYSTEM
Oil from the compressor oil sump, at compressor discharge pressure, is directed through the oil filter, cooling system, and to the side of the compressor stator, where it is injected into the compressor. At the same time oil is directed internally to the bearings and shaft seal of the compressor. The oil-laden air is then discharged back into the sump.

OIL SUMP
Compressed, oil-laden air enters the sump from the compressor. As the oil-laden air enters the sump, most of the oil is separated from the air as it passes through a series of baffles and diffusion plates. The oil accumulates at the bottom of the sump for recirculation. However, some small droplets of oil remain suspended in the air and are passed on to the coalescer.

PRESSURE RELIEF VALVE
The pop pressure relief valve is set at 200 PSI and is located at the top of the air/oil sump. This valve acts as a backup to protect the system from excessive pressure that might result from a malfunction.

AIR/OIL COALESCER
The coalescer is self-contained within a spin-on housing and is independent of the sump. When air is demanded at the service line, it passes through the coalescer which efficiently provides the final stage of oil separation.

OIL RETURN LINE
The oil that is removed by the coalescer accumulates at the bottom of the can and is returned through an oil return line to the compressor. The oil return line is 1/4 and goes to elbow hose fitting which is located at the compressor.

MINIMUM PRESSURE VALVE
The minimum pressure valve is located at the outlet of the coalescer head and serves to maintain a minimum discharge pressure of 65 PSIG in operation, which is required to assure adequate compressor lubrication pressure.

OIL FILTER
The compressor oil filter is the full-flow replaceable element type and has a safety bypass built into it.

DESCRIPTION OF COMPONENTS

COMPRESSOR COOLING SYSTEM
The compressor cooling system consists of a remote mounted oil cooler with electric fan activated upon starting the compressor. The compressor oil cooler maintains compressor oil temperature between 160³F via a thermovalve that starts and stops the oil to the cooler.

ELECTRICAL AND SAFETY CIRCUIT SYSTEM
The IMT PTO unit is supplied with a hourmeter, wire harness and a shutdown. Engine shutdown occurs in the event of high compressor temperature, on compressor trucks with cable shift PTO's.

AUTOMATIC BLOW DOWN VALVE
There is one blow down valve in the compressor system. It is located at the downstream side of the coalescer head and will automatically bleed the sump to zero pressure when the compressor is disengaged. Blow down time interval takes between 30 to 60 seconds

CONTROL SYSTEM
The prime component of the compressor control system is the compressor inlet valve. The control system is designed to match air supply to air demand and to prevent excessive discharge pressure when compressor is at idle. Control of air delivery is accomplished by the inlet valve regulation and modulation as directed by the discharge pressure regulator.

DISCHARGE PRESSURE REGULATOR VALVE
This valve, located on the coalescer head is used to set the desired discharge pressure within the operating pressure range. Turning the regulator screw clockwise increased the working pressure, a counterclockwise movement of the screw reduces the working pressure. This system has a maximum operating pressure of 175 psi.

NOTE

The operating pressure for most air tools ranges between 90 and 125 psi. Operating above the recommended pressure will decrease the life of the tool. Higher operating pressure can also over torque nut and bolts, fatiguing the fastener and mating parts. Strictly adhere to tool operating pressures and torque standards set forth by the tool manufacturer and the specifications of the equipment that work is being performed on.

INLET VALVE
The compressor inlet valve is a piston operated disc valve that regulates the inlet opening to control capacity and serving as a check valve at shutdown.

AIR AFTERCOOLER
The air aftercooler is mounted between the ouput air line at the coalescer head and the 22 gallon air tank. Air leaving the compressor enters the aftercooler and passes through approximately 22 feet of cooling coil. The coil is cooled by a waterproof fan. Temperature of the air is reduced to approximately 4-7°F above ambient temperature. Condensation is directed to the air tank, where it is collected.

CONTROL SYSTEM OPERATION
The following discussion explains the operation of the control system from a condition of "no load" to a condition of "full capacity" at working pressure. For the working pressure range of your machine, refer to applicable data in "Specifications".

The pressure regulator, mounted on the coalescer head, operates as follows:

1. As the demand for air decreases, the receiver pressure rises. When this pressure exceeds the set point of the pressure regulator, the regulator opens sending a secondary pressure signal to the inlet valve. The poppet valve moves towards the valve inlet against the force of the modulating spring inside the valve. This regulates the opening area of the inlet valve.

2. If the air demand goes to zero, (service valve closed or air dead headed at tool) the inlet valve will close completely.

3. As the demand for air increases, the secondary pressure signal to the inlet valve is removed and the inlet valve poppet modulates to full open.

SERIAL NUMBERS PRED991001 THROUGH PRED021073.

INSPECTION, LUBRICATION & MAINTENANCE

This section contains instructions for performing the inspection, lubrication, and maintenance procedures required to maintain the compressor in proper operating condition. The importance of performing the maintenance described herein cannot be over emphasized.

The periodic maintenance procedures to be performed on the equipment covered by this manual are listed below. The intervals between inspections specified are the maximum intervals. Make more frequent inspections if the unit is operation in a dusty environment, in high ambient temperature, or in other unusual conditions. A planned program of periodic inspection and maintenance will help avoid premature failure and costly repairs. Daily visual inspections should become a routine.

The LUBRICATION AND MAINTENANCE CHART lists serviceable items on this compressor package. The items are listed according to their frequency of maintenance, followed by those items which need only “As Required” maintenance.

The maintenance time intervals are expressed in hours. The hourmeter shows the total number of hours your compressor has run. Use the hourmeter readings for determining your maintenance schedules. Perform the maintenance at multiple intervals of the hours shown. For example, when the hourmeter shows “100” on the dial, all items listed under “EVERY 10 HOURS” should be serviced for the tenth time, and all items under “EVERY 50 HOURS” should be serviced for the second time, and so on.

DANGER

Compressor must be shut down and completely relieved of pressure prior to checking fluid levels. Open service valve to ensure relief of system air pressure. Failure to comply with this warning may cause damage to property and serious bodily harm.

LUBRICATION AND MAINTENANCE CHART

INTERVAL	ACTION
PERIODICALLY DURING OPERATION	1. Observe all gauge readings. Note any change from the normal readings and determine the cause. Repair as necessary. Notes: "Normal" is the usual gauge reading when operating at similar conditions on a day-to-day operation.
EVERY 10 HRS (DAILY)	1. Check compressor oil level. 2. Check air filter pressure drop indicator while compressor is operating. 3. Check for oil and air leaks. 4. Check safety circuit switches.
EVERY 25 HRS (MONTHLY)	1. Drain water from compressor oil.
EVERY 100 HRS	1. Grease compressor drive shaft.
EVERY 500 HRS (6 MONTHS)	1. Change compressor oil and oil filter. 2. Check compressor shaft seal for leakage. 3. Check air filter piping, fittings and clamps. 4. Check compressor supports. 5. Install new air filter element. Shorter interval may be necessary under dusty conditions. 6. Check sump safety valve.
EVERY 1000 HRS	1. Change coalescer element.
PERIODICALLY (AS REQD)	1. Inspect and clean air filter element. 2. Inspect and replace spin-on coalescer element if necessary. 3. Inspect and clean oil cooler fans.

NOTE

Compressor oil and filter is to be changed after the first 50 hours of operation. After this, follow normal intervals.

SERIAL NUMBERS PRED991001 THROUGH PRED021073.

LUBRICANT RECOMMENDATIONS

WARNING

It is important that the compressor oil be of a recommended type and that this oil, as well as the air filter, oil filter, and coalescer elements be inspected and replaced as stated in this manual.

The combination of a coalescer element loaded with dirt and oxidized oil products together with increased air velocity as a result of this clogged condition may produce a critical point while the machine is in operation where ignition can take place and could cause a fire in the oil sump.

Failure to comply with this warning may cause damage to property and serious bodily harm.

The following are general characteristics for IMT rotary screw lubricant. Due to the impossibility of establishing limits on all physical and chemical properties of lubricants which can affect their performance in the compressor over a broad range of environmental influences, the responsibility for recommending and consistently furnishing a suitable heavy duty lubricant must rest with the individual supplier if they choose not to use the recommended IMT rotary screw lubricant. The lubricant supplier's recommendation must, therefore, be based upon not only the following general characteristics, but also upon his own knowledge of the suitability of the recommended lubricant in PTO helical screw type air compressors operating in the particular environment involved. The owner of this equipment should contact the factory if IMT rotary screw lubricant is not used as supplied with this equipment.

CAUTION

Mixing different types or brands of lubricants is not recommended due to the possibility of a dilution of the additives or reaction between additives of different types.

IMT "Cool Blue" rotary screw lubricant shipped with your kit contains additives for rust, corrosion and anti-wear inhibitors. Use of any other lubricant is not recommended.

LUBRICANT CHARACTERISTICS

1. Flash point 400°F minimum
2. Pour point -40°F.
3. Contains rust and corrosion inhibitors.
4. Contains foam suppressors.
5. Contains oxidation stabilizer.

NOTE

Due to environmental factors, the useful life of all 'Extended Life' lubricants may be shorter than quoted by the lubricant supplier. IMT encourages the user to closely monitor the lubricant condition and to participate in an oil analysis program with the supplier.

NOTE

No lubricant, however good and/or expensive, can replace proper maintenance and attention. Select and use lubricant wisely.

MAINTENANCE

One hour of compressor operation is equal to about 40 road miles on an engine. Thus, eight hours operation is equal to 320 road miles, 250 hours is equal to 10,000 road miles, etc.

COMPRESSOR OIL SUMP FILL, LEVEL, AND DRAIN

Before adding or changing compressor oil make sure that the sump is completely relieve of pressure. Add oil at the fill cap located at the top of the compressor panel next to the oil cooler assembly. A drain valve is provided at the bottom of the sump. The proper oil level, when unit is shut down and has had time to settle, is at the midpoint of the oil sightglass. The truck must be level when checking the oil. DO NOT OVERFILL. The oil sump capacity is given in “Compressor Specifications”.

DANGER

Do not attempt to drain condensate, remove the oil level fill plug, or break any connection in the air or oil system without first shutting off compressor and manually relieving pressure from the sump and air storage tank. Failure to comply with this warning may cause damage to property and seriously bodily harm.

AIR INTAKE FILTER

The air intake filter is a heavy-duty two-stage dry type high efficiency filter designed to protect the compressor from dust and foreign objects.

The filter is equipped with an evacuator cup for continuous dust ejection while operating and when stopped.

Frequency of maintenance of the filter depends on dust conditions at the operating site. The filter element must be serviced when clogged (maximum pressure drop for proper operation is 15” H20). The filter is equipped with a pressure drop indicator, and the element should be changed based on it’s reading first and then by the maintenance intervals outlined.

AIR/OIL COALESCER

The air/oil coalescer employs an element permanently housed within a spin-on canister. This is a single piece unit that requires replacement when it fails to remove the oil from the discharge air, or pressure drop across it exceeds 15 PSI. Dirty oil clogs the element and increases the pressure drop across it.

To replace element proceed as follows:

1. Shutdown compressor and wait for complete blow down (zero pressure).
2. Disconnect drain line.
3. Turn element counterclockwise for removal (viewing element from bottom).
4. Install new rubber seal in head and supply a film of fluid directly to seal.
5. Rotate element clockwise by hand until element contacts seal (viewing element from bottom).
6. Rotate element approximately one more turn clockwise with band wrench near the top of element.
7. Reconnect drain line.
8. Run system and check for leaks.

NOTE

When connecting drain line, hold canister nut securely when tightening the hose fitting.

WARNING

Do not substitute element. Use only a genuine IMT replacement element. This element is rated at 200 psi working pressure. Use of any other element may be hazardous and could impair the performance and reliability of the compressor, possibly voiding the warranty and/or resulting in damage to property and serious bodily harm.

MAINTENANCE

OIL RETURN LINE
This line originates at the bottom of the air/oil coalescer and flows through a 1/4 hose elbow located at the air-end.

OIL FILTER
The compressor oil filter is a spin-on, throw away type.

To replace filter proceed as follows:

1. Make sure system pressure is relieved.
2. Remove filter by unscrewing from filter head (turn counterclockwise by hand viewing from bottom) and discard.
3. Install a new filter by applying a little oil to the seal and then screw the filter on by hand (turning it clockwise until hand tight, plus one - third turn when viewed from bottom). Do not use tools to tighten the filter.
4. Check for leaks in operation.

WARNING

Do not substitute element. Use only a genuine IMT replacement element. This element is rated at 200 psi working pressure. Use of any other element may be hazardous and could impair the performance and reliability of the compressor, possibly voiding the warranty and/or resulting in damage to property and serious bodily harm.

OIL COOLER
The interior of the oil cooler should be cleaned when the pressure drop across it at full flow exceeds 25 PSI.
The following procedure has been recommended by the vendor who supplies the cooler:

1. Remove cooler.
2. Circulate a suitable solvent to dissolve and remove varnish and sludge.
3. Flush generously with IMT compressor lubricant.
4. After cooler is reinstalled and compressor is filled with fresh oil, change compressor oil after 50 hours of normal operation.

PTO SHAFT SEAL INSTALLATION INSTRUCTIONS

1. Remove pto drive shaft, companion flange and key.
2. Remove (4) socket head metric bolts on cover and slide cover off shaft.
3. Pull seal wear sleeve off shaft with puller. Adding heat to one area only on wear sleeve will help enlarge and aid in sleeve removal.
4. Clean shaft and surface of bearing. Remove all burrs from shaft where the wear sleeve gets installed.
5. Press new wear sleeve onto shaft. Oil heating new wear sleeve to 212°F approximately aids in the installation of this ring.
6. Press old shaft seal out of cover and clean cover for assembly of new seal.
7. Press new seal into cover (included in repair kit).
8. Apply silicone to outside diameter of assembly tool and slide assembly onto drive shaft until it touches the wear sleeve (tool and silicone included in repair kit).
9. Install cover, new o-ring, new seal assembly, over shaft and assembly tool. Note: Assembly tool is slip fit on shaft and allows new seal in cover to slide on to wear sleeve without cutting the lip of shaft seal. One new cover is on the assembly tool.
10. Bolt cover on squarely and slide off assembly tool.
11. Reinstall drive line assembly.

NOTE

The seal cover is installed using an o-ring gasket. Care should be taken to not pinch the o-ring out of its groove upon reinstallation.

MAINTENANCE

PTO

The PTO should be serviced in accordance with the PTO manual. The SAE side-mount type of PTO is lubricated by the transmission oil and thus requires little maintenance. It is strongly recommended that you periodically torque the fasteners in accordance with the PTO manual.

HYDRAULIC PUMP OPTION
(Model 8511 on Ford 450-550 & model 8513 on Ford 350-450 Auto-Trans ONLY)

The single cog belt arrangement is sized for an average life of 1000 hours. This time frame can be increased or decreased depending on the end users periodic maintenance schedule. Drive belt tension should be checked for adjustment every 100 hours there after. Belt deflection is to be checked at midpoint between both pulleys. Belt deflection is to be 1/8" at 3.5 lbs. Minimum to 5.0 lbs. Maximum.

BELT TENSION - Belt tension is accomplished as follows:

1. Loosen the 3/8" bolts that attach the hydraulic pump to mounting plate. Pump should now pivot free on bottom mounting bolt.

2. Pivot hydraulic pump until the correct deflection is accomplished. Hold pump in the position until the two 3/8" bolts are retightened.

NOTE

Over-tensing belt can damage compressor and hydraulic pump. When tensing belt all hardware should be broken loose only to the point in which the hydraulic pump can pivot.

COMPRESSOR TROUBLESHOOTING GUIDE

TROUBLE	CAUSE	WHAT TO DO
Compressor does not make air.	Air tank drain open.	- Close tank drain valve.
	Blow down valve stuck.	- Remove blow-down valve, clean out, re-assemble.
	PTO not engaged.	- Engage PTO per instructions.
Compressor/truck shuts down. **NOTE:** If a shut down occurs, check the temperature gauge and note the temperature. If it reads 240 or more degrees (or is in the red zone), the system is overheating. See "What to do" at right. If the temperature is under 240 degrees (or in the green zone), take pto out of gear and restart the truck. If the truck starts, re-engage the pto and restart the compressor. If the truck does not restart, the problem is not the compressor and the chassis should be checked out.	High air end temperature.	- Check oil level. Add as required per filling instructions. Do not overfill. - Wait for the compressor to cool down. Restart the truck and compressor. If the truck shuts down again, continue with trouble shooting below.
	Fan not operating.	- Make sure that cooling fan is operating. If not, check fuse in harness next to fan and fan relay. See also speed control below.
	Air flow.	- Ensure that cooler does not have any obstruction to airflow. - Check oil cooler core. Clean as necessary. - High ambient air temperature. Contact IMT Technical Support.
	Leaks.	- Check for air leaking from tank or blow down fittings.
	Safety system failure.	- Check high temperature shut down circuitry for proper operation. - Check needle position on temperature gauge when compressor is cool. If the needle is not all the way to the left, replace the gauge.
	Thermal valve failure.	- Check thermal valve for proper operation. By-pass valve if in doubt to verify failure.
	Oil flow restricted.	- Check oil filter head for blockage (ex: by-pass valve in filter head). - Remove hoses and check for blockage.
Low system pressure	Air tank drain open.	- Close tank drain valve.
	Dirty air filter.	- Check filter condition. Replace as required.
	Air leak.	- Check air system fittings.
	Pressure control valve stuck.	- Remove, dissemble, clean. Reassemble and install.
	Inlet valve not fully open.	- Inspect and repair. Check control system operation.
	System demands exceed compressor delivery.	- Reduce air demand and/or consumption. Do not operate multiple tools at a time.
Coalescer filter plugging	Excessive water in system.	- Reduce short run (i.e.: less than 15 minute) times. Run compressor for at least 15-20 minutes each time it is started. - Drain water from sump-tank monthly, more if in humid conditions.
	Foreign material entering compressor inlet.	- Check air inlet hose from the air filter. Replace if damaged.

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COMPRESSOR TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	WHAT TO DO
High oil consumption/oil in air system.	Excessive oil level.	- Check level per filling instructions. Drain excessive oil if necessary.
	Plugged coalescer filter.	- Replace coalescer filter.
	Compressor operating at low pressure (60 psi or below).	- Operate at rated pressure. - Reduce system load.
	Compressor oil leak.	- Inspect and repair leaks.
	Leaking oil lines or oil cooler.	- Inspect and repair all oil lines and/or cooler.
	Leaking compressor shaft seal.	- Replace seal.
	Plugged coalescer return line.	- Inspect and clean hose and connections between coalescer filter and air end.
Water in air system.	Defective moisture separator/drain trap.	- Inspect and clean if required. Replace separator/trap if required.
	After-cooler core dirty.	- Inspect and clean.
	Air tank not drained.	- Open tank drain. (This should be done each time the compressor is run, prior to driving the truck.)
	Excessive moisture in compressor oil.	- Let truck sit overnight. Open petcock/drain valve on compressor sump tank until oil starts to drain. Close valve and check oil lever per filling instructions.
Excessive noise level.	Incorrect engine speed.	- Check engine speed and speed control operation. Check per specified speed. If speed control is not working properly, con tract IMT Technical Support.
	Low oil level.	- Check oil level per filling instructions. Fill as required.
Excessive vibration.	Loose components.	- Inspect and tighten.
	Compressor bearing failure.	- Contact authorized Distributor or IMT immediately. Do not operate unit.
	Incorrect driveshaft angle.	- Check driveshaft angle per installation manual or contact IMT.
	Drive shaft u-joint failure.	- Inspect and repair as needed. Do not operate unit until repairs have been made. Damage to the chassis or compressor and/or serious injury could occur if driveshaft or u-joint breaks.
Shaft seal leak.	Defective Seal.	- Replace per service manual or contact authorized Distributor or contact IMT Technical Support.
Pressure relief valve opens.	Compressor operating over pressure.	- Inspect and verify pressure control valve and control circuitry.
		- Remove, disassemble, and clean pressure control valve. Reassemble and reinstall.
	Defective valve.	- Replace valve.
	Coalescer filter plugged up.	- Replace filter.
Sump pressure does not blow down.	Automatic blow down valve may be inoperative at coalescer head.	- Inspect and repair/replace blow down valve.
		- Remove, disassemble, and clean blow down valve. Reassemble and reinstall.

SERIAL NUMBERS PRED991001 THROUGH PRED021073.

COMPRESSOR TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	WHAT TO DO
Speed control does not come up.	Parking brake is not set. Blown fuse. Compressor is not making air. No signal to speed control module from compressor.	- Engage parking brake. - Check and replace 5 amp fuse located behind panel in right front compartment. - Ensure that PTO is engaged and that the PTO shaft is turning. - With compressor running, check for 12 volts across 20lb pressure switch (N.O.). If switch is not closing, replace switch. - With the compressor off, check for 12 volts across 5lb pressure switch (N.C.). If switch does not close, replace switch.
Speed control comes on when engaging the parking brake with the pto off.	20lb pressure switch.	- With the compressor off, check for 12 volts across 20lb pressure switch (N.O.). If switch is not open, replace switch.
Compressor has experienced a “flash”.	Low oil level, high operating temperature, or oil starvation.	- See above for “What to Do”. - Check oil level per filling instructions. Fill as required. - See Flash Recovery Procedure in manual.

FLASH RECOVERY PROCEDURE FOR 45 CFM ROTARY COMPRESSOR

The following highlights the steps required to flush system when it has flashed.

1. Flush air compressor and check for rotor grinding.
   (a) Remove 2½" inlet hose from inlet valve and remove the driveshaft.
   (b) Drain sump tank.
   (c) Remove 1" hose from side of oil sump tank.
   (d) Place the 1" hose at same height of inlet valve and fill inlet of compressor with clean synthetic cool blue oil. Once full, lower hose into bucket and rotate compressor by hand to evacuate any remaining oil. Repeat until oil is clean. Make sure the compressor turns freely by hand and that there is no grinding present.
   (e) Reinstall drive shaft.

2. Flush oil sump tank
   (a) Leave the 1" hose from the compressor flush procedure off. Loosen tank-mounting bands, disconnect and mark all hoses and remove oil tank. Remove tank.
   (b) Fill tank with synthetic cool blue oil, until about half full. Slosh oil from end to end, then drain out oil at drain plug in bottom of tank. Check drain-plug and tee for any restrictions, (i.e. chunks of hose).
   (c) Reinstall tank and install the filler tube.
   (d) Replace the ½" hose from oil tank to oil filter head. Verify that plastic bypass valve is intact in filter head.

3. Flush oil cooler
   (a) Replace both hoses from cooler to thermal valve.
   (b) Inspect that the plastic shroud and fan blades are intact. Put power direct to red lead (ground black lead) at fan motor to verify that motor works. Do not run the motor outside of the shroud. Leave package assembled. Fan is a puller style, verify that air from fan blows out towards cab of truck.
   (c) Replace 1" hose from compressor to oil sump tank.
   (d) Replace all filters, air, oil and coalescer.
   (e) Re-connect all hoses and add synthetic cool blue oil to proper level in tank.

4. Test safety circuit
   (a) Start truck. Do not start air compressor, go to Murphy switch gauge and short across the post to the metal bezel of the gauge and truck should kill.
   (b) You should be ready to start air compressor for testing. Start truck; engage PTO, run compressor for five minutes. Drain oil, change oil filter, fill oil to proper level, and finish testing.

COMPRESSOR OPERATION

CONTINUED

STARTING/STOPPING

An operating procedure decal is furnished with every PTO Compressor. The decal should be attached to the dashboard or visor of the truck where it will be visible to the driver. Cable shift PTO's require the use of decal 301476. Hot shift PTO's are to use decal 301661. Both decals are supplied with your kit. Install the appropriate decal based on the type of PTO used.

The following decals are samples.

THIS TRUCK IS EQUIPPED WITH A

IMT

PTO COMPRESSOR PACKAGE

START UP PROCEDURE

1. SET BRAKES PER COMPANY PROCEDURE AND CHOCK WHEELS.
2. CHECK COMPRESSOR OIL LEVEL, ADD IF LOW.
3. DEPRESS CLUTCH, ENGAGE P.T.O.
4. PUT TRANSMISSION IN NEUTRAL.
5. LET OUT CLUTCH AND DEPRESS FUEL PEDAL MOMENTARILY.

SHUTDOWN PROCEDURE

1. CLOSE SERVICE VALVE.
2. DEPRESS CLUTCH AND HOLD FOR COMPRESSOR BLOWDOWN.
3. DISENGAGE P.T.O.

301476

THIS TRUCK IS EQUIPPED WITH A

IMT

PTO COMPRESSOR PACKAGE

START UP PROCEDURE

1. STOP VEHICLE AND ENGAGE PARKING BRAKES.
2. SHIFT TRANSMISSION TO NEUTRAL.
3. DEPRESS PTO ON/OFF SWITCH TO ON POSITION. ENGAGEMENT WILL BE COMPLETE WHEN RED INDICATOR LIGHT COMES ON.

SHUTDOWN PROCEDURE

1. CLOSE SERVICE VALVE.
2. DEPRESS PTO ON/OFF SWITCH TO OFF POSITION.

301661

SERIAL NUMBERS PRED991001 THROUGH PRED021073.

COMPRESSOR OPERATION

Before starting the PTO/compressor, read this section thoroughly. Familiarize yourself with the controls and indicators, their purpose, location, and use.

CONTROL OR INDICATOR	PURPOSE
HOURMETER	Indicator accumulated hours of actual compressor operation.
FLUID LEVEL SIGHT TUBE	Indicates fluid level in the sump. Proper level should be between indicator marks on tube. Check this level when the compressor is disengaged and the vehicle is parked on level ground.
PRESSURE RELIEF VALVE	Vents sump pressure to the atmosphere if the pressure inside the sump exceeds 200 psi.
COMPRESSOR INLET CONTROL VALVE	Regulates the amount of air intake in accordance with the amount of compressed air being used. Isolates fluid in compressor unit on shutdown.
PRESSURE REGULATING VALVE	Senses air pressure from sump to provide automatic regulation of the compressor inlet control valve and load controller
BLOW DOWN VALVE	Coalescer head blow down valve vents the sump pressure to the atmosphere at shut down.
MINIMUM PRESSURE VALVE	Restricts air flow to balance sump and service air pressure. Assures a minimum of 65 psi to maintain compressor lubrication.

COMPRESSOR OPERATION-FORD F-SERIES W/AT

OPERATING INSTRUCTIONS

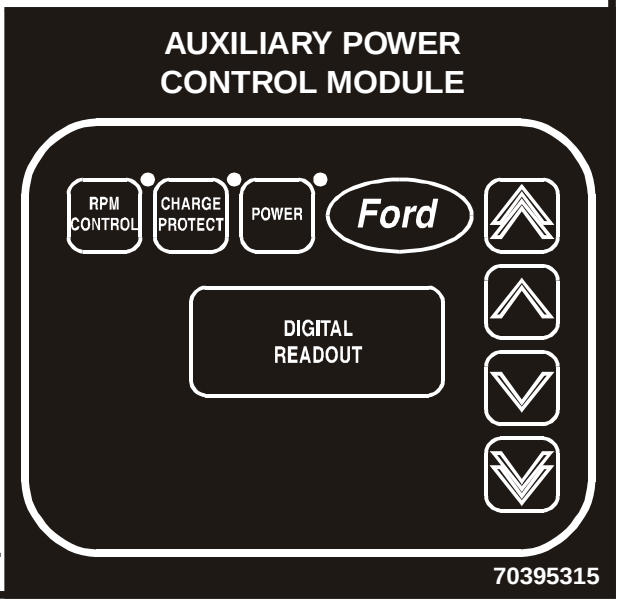
Air Compressor When Mounted on Ford F-Series with Automatic Transmission

TO OPERATE:

1. **Set the parking brake.**
2. **Press "POWER" switch on Control Module.**
3. **Press "RPM CONTROL" switch.**
4. **Depress BRAKE pedal, then shift transmission to "DRIVE".**
5. **After PTO is engaged, shift transmission to "PARK", then release BRAKE pedal.**
6. **Press "FORD OVAL" switch to set engine RPM to 1400.**
7. **Air compressor is now operational.**

TO SHUT DOWN:

1. **Press PTO rocker switch to "OFF".**
2. **Press "RPM CONTROL" switch on Control Module.**
3. **Press "POWER" switch on Control Module.**
4. **PTO & Control Module are now disengaged.**
5. **Parking Brake may now be released.**



OPERATING CONDITIONS

The following conditions should exist for maximum performance of the PTO/compressor. The truck should be as close to level as possible when operating. The compressor will operate on a 15 degree sideward and length wise tilt without any adverse problems.

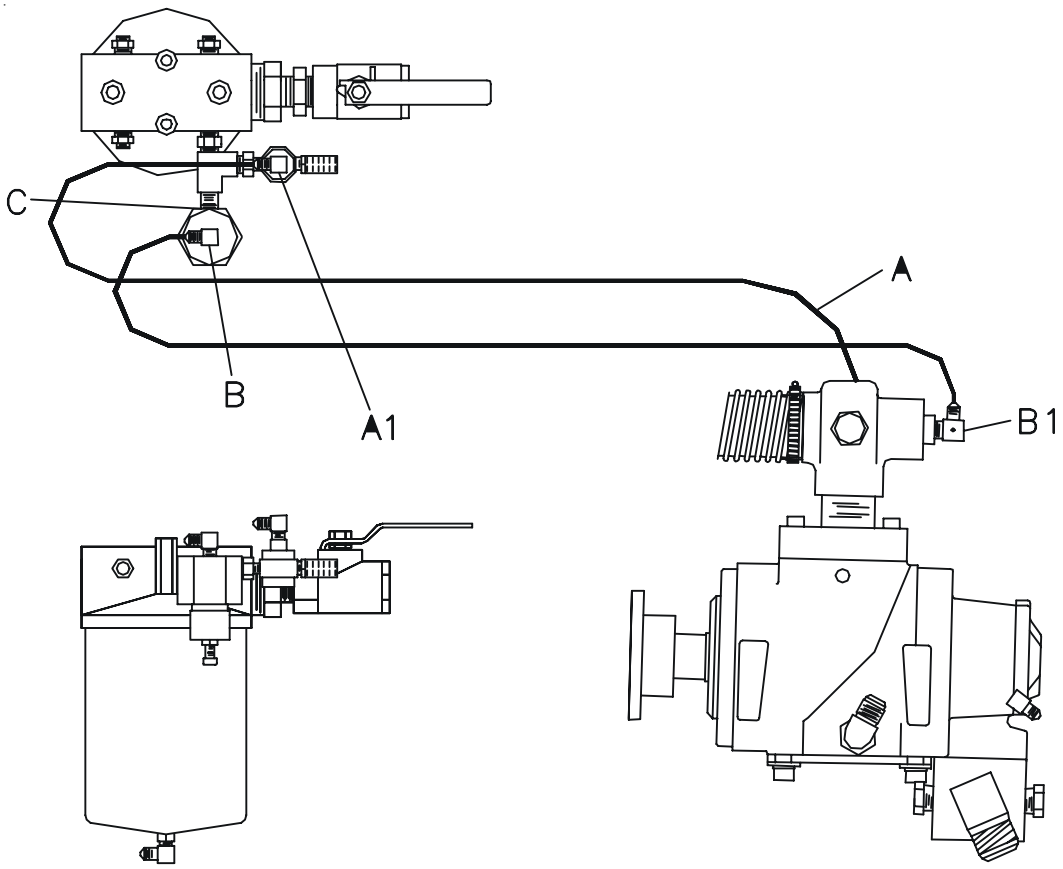
NOTE

The compressor service valve should be relocated to the hose reel inlet or be the customer's air connection port when a hose reel is not used. Typical plumbing from minimum pressure valve should flow in the following order:

1. Minimum pressure valve.
2. Air tank.
3. Service valve.
4. Moisture trap/gauge/oiler combination
5. Hose reel.

CONTROL HOSE PORT CALL OUTS

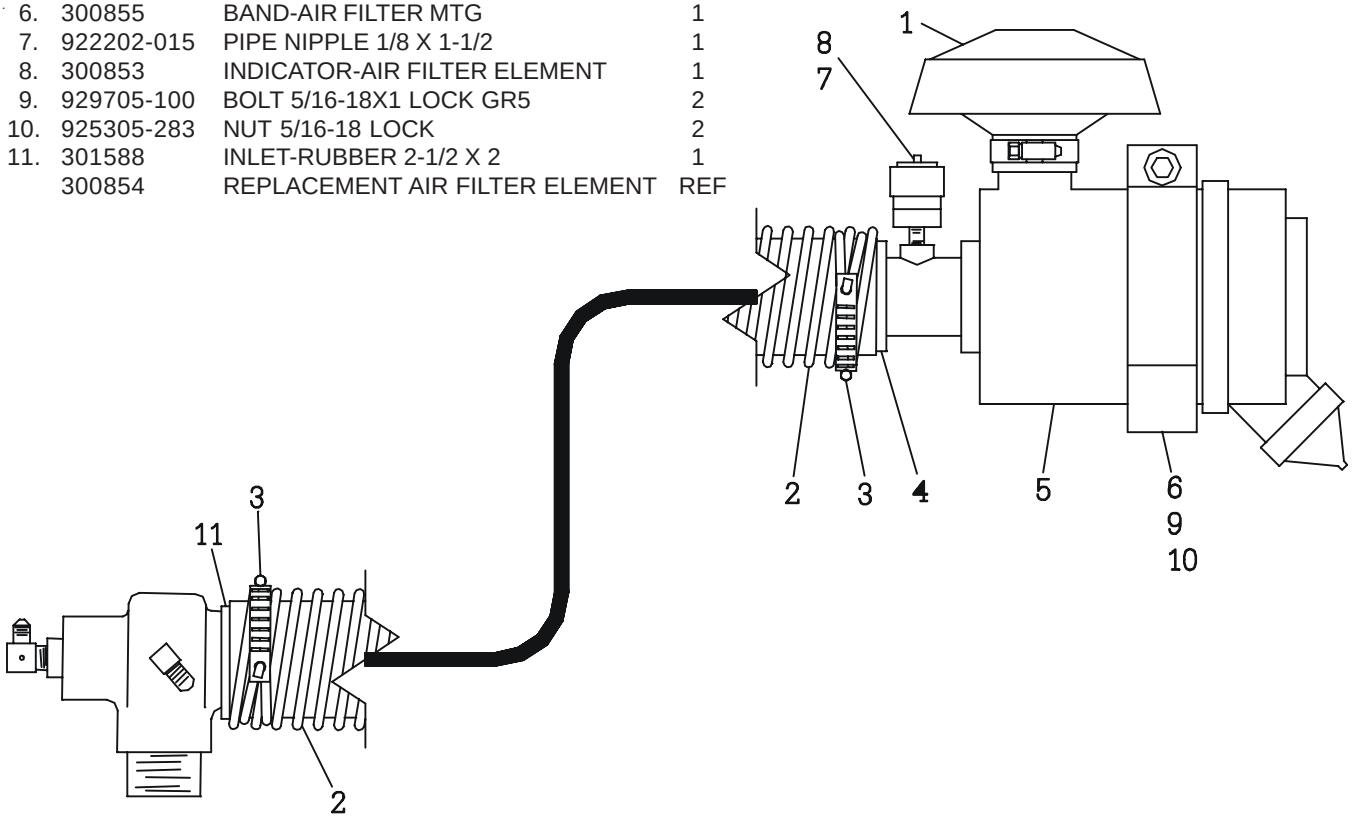
PORT	DESCRIPTION
A	Air signal supply, at shutdown only to A1
A1	Signal from 'A' at shutdown to exhaust air from compressor system.
B	Outlet regulated air pressure signal, present only when there is no demand for air. (i.e. Closed service valve or air pressure dead headed into tool that is being used. Maximum pressure in this line is 50 psig.
B1	Air signal from 'B' regulator outlet to compressor inlet valve regulating port. Air signal modulates air opening from open to close when there is not demand for air.
C	System air pressure signal port to air pressure regulator inlet. Air pressure is present anytime there is air pressure in the system.



SERIAL NUMBERS PRED991001 THROUGH PRED021073.

AIR INLET SYSTEM-20040

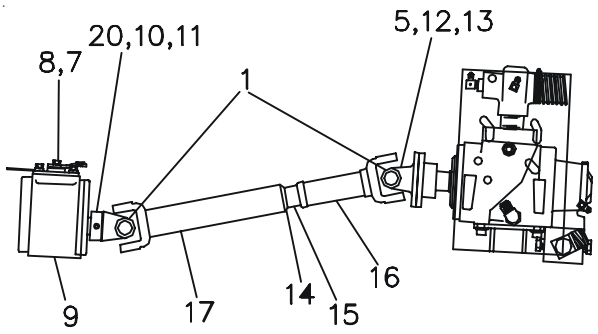
1.	300857	CAP-AIR FILTER	1
2.	301785-250	HOSE-AIR INLET 2-1/2 ID	10FT
3.	301786-250	HOSE CLAMP	2
4.	301397	INSERT-RUBBER 2-1/2 X 1-3/4	1
5.	300918	AIR FILTER ASM	1
6.	300855	BAND-AIR FILTER MTG	1
7.	922202-015	PIPE NIPPLE 1/8 X 1-1/2	1
8.	300853	INDICATOR-AIR FILTER ELEMENT	1
9.	929705-100	BOLT 5/16-18X1 LOCK GR5	2
10.	925305-283	NUT 5/16-18 LOCK	2
11.	301588	INLET-RUBBER 2-1/2 X 2	1
	300854	REPLACEMENT AIR FILTER ELEMENT	REF



SERIAL NUMBERS PRED991001 THROUGH PRED021073.

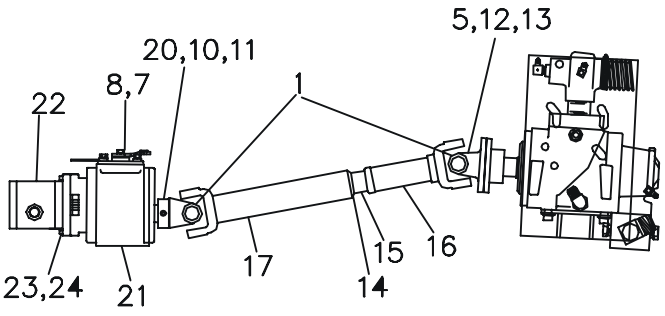
PTO AND DRIVELINE SYSTEM

20040



1.	300154-153	U-JOINT	2
2.	300164-533	YOKE-END	1
5.	300196-329	YOKE-FLANGE	1
7.	301575	BRKT-WIRE SHAFT PTO	1
8.	934504-150	SCR-1/4X1-1/2 SLFTPG	4
9.	300159-105	PTO	1
10.	973406-050	SET SCR 3/8 W/HOLE	1
11.	301486	WIRE-SET SCR	1
12.	929406-125	BOLT-3/8-24 HHGR8	4
13.	925706-198	NUT 3/8-24 LOCK GR8	4
14.	301598-7572	YOKE-TUBE	1
15.	300198-7012	SHAFT-SLIP TUBE	1
16.	300155-0212	YOKE-SLIP ASM	1
17.	301599	TUBE-DRIVELINE	.67FT

20040-05P



1.	300154-153	U-JOINT	2
5.	300196-329	YOKE-FLANGE	1
7.	301575	BRKT-WIRE SHAFT PTO	1
8.	934504-150	SCR-1/4X1-1/2 SLFTPG	4
10.	973406-050	SET SCR 3/8 W/HOLE	1
11.	301486	WIRE-SET SCR	1
12.	929406-125	BOLT-3/8-24 HHGR8	4
13.	925706-198	NUT 3/8-24 LOCK GR8	4
14.	301598-7572	YOKE-TUBE	1
15.	300198-7012	SHAFT-SLIP TUBE	1
16.	300155-0212	YOKE-SLIP ASM	1
17.	301599	TUBE-DRIVELINE	.67FT
20.	300164-473M	YOKE-END	1
21.	300159-137	PTO	1
22.	301576-050	PUMP-HYD	1
23.	929806-125	BOLT 3/8-16X1-1/4 HHGR8	2
24.	937806-094	WASHER 3/8 LOCK GR8	2

WARNING

THE INSTALLER OF THE DRIVELINE MUST INSPECT THE FINAL POSITION OF THE DRIVELINE TO DETERMINE WHETHER ITS LOCATION PROVIDES SUFFICIENT PROTECTION TO AN OPERATOR, OR OTHER PERSONNEL, FROM HAZARDS ASSOCIATED WITH A ROTATING DRIVELINE. IF PROTECTION IS INSUFFICIENT, THE INSTALLATION OF A GUARD IS REQUIRED. IF YOU ARE UNSURE OF METHODS TO GUARD A ROTATING DRIVELINE, CALL IOWA MOLD TOOLING CO., INC. FOR INSTRUCTIONS. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.

SERIAL NUMBERS PRED991001 THROUGH PRED021073.

BOLT BAG PARTS LOCATED IN BOX

QTY	PART	DESCRIPTION	LOCATION
4	929808-200	BOLT 1/2 - 13X2 GR8	
4	937808-125	WASHER 1/2 LOCK	Compressor mtg foot to frame rail - compressor mtg
4	938208-112	WASHER 1/2 PLAIN PLATED	System #1, 2, 4, & 6
4	926008-448	NUT 1/2-13 HEX GR8	
8	937806-094	WASHER 3/8 LOCK GR8	Receiver tank mtg - Discharge system #1, 3, & 24
8	938206-071	WASHER 3/8 FLAT	Note: Tank bands have qty (2) ea. welded nuts attached
4	929806-125	BOLT 3/8 - 16X1 - 1/4 HHGR8	
4	926006-337	NUT 3/8-16 HEX GR8	
4	301601	SPACER .44X2.75L	Receiver tank mtg brackets to frame rail, qty (4) of
4	929806-400	BOLT 3/8-16X4 HHGR8	Discharge system #46 & 47
15	925305-283	NUT 5/16-16 HEX WHIZ	Air inlet system-qty (2) bolts & nuts for air filter
13	929705-100	BOLT 5/16-18X1 WHIZLOCK	bands #11 & 12 Oil Cooling System-qty (6) bolts & nuts for cooler straps, brackets & oil filter mtg #4 & 5 Hose system qty (5) bolts & nuts used on 3/4 hose clamps & (1) 1-1/2 hose clamp in 6x6x12 misc parts box.
2	929105-200	BOLT 5/16-18X2 HHGR5	Upper cooling mtg bolts #18
2	901215-010	PIPE COUPLING 1/4	Upper cooling mtg spacer #17

RECOMMENDED SPARE PARTS LIST

PART NUMBER	DESCRIPTION	QTY
300005	OIL FILTER ELEMENT	1
300854	AIR FILTER ELEMENT	1
301670	SPIN ON COALESCER	1
300187	REGULATOR REPAIR KIT	1
301409	SHAFT SESAL REPAIR KIT	1
300186-003 (used on 301010)	INLET VALVE REPAIR KIT	1
300186-004 (used on 301587)	INLET VALVE REPAIR KIT	1
302138025	“COOL BLUE” ROTARY SCREW COMP. OIL	QUART
302138300	“COOL BLUE” ROTARY SCREW COMP. OIL	CASE

SERIAL NUMBERS PRED991001 THROUGH PRED021073.

SERVICE QUESTIONNAIRE

DATE: _____

1. Information given by : _____
2. Information received by: _____
3. Has anyone helped you: Yes: _____ _____ No: _____
4. Distributor: _____
5. End-User: _____
6. Phone Number: _____
7. Make and Model for PTO: _____
8. IMT Serial #: _____
9. Make and Model of Engine: _____
10. Engine: _____
11. Transmission: _____

12. Nature of Problem: _____

13. Engine RPM: _____
14. Compressor RPM: _____
15. Action Taken: _____

ADDITIONAL COMMENTS: _____

IOWA MOLD TOOLING CO., INC.
500 HWY. 18 WEST
GARNER, IA 50438
641-923-3711

SECTION 3B. PTO AIR COMPRESSOR

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SERIAL NUMBERS PRED021074 TO PRESENT.

SPECIFICATIONS

IMT PREDATOR PTO AIR COMPRESSOR

DELIVERY @ 150 PSIG	45 CFM @ 110 PSI TO 150 PSI
INPUT SPEED RPM TO COMPRESSOR PUMP	2250 RPM (NON-GEARED) 1450 RPM (GEARED)
FLUID CAPACITY	11 QUARTS
COMPRESSOR / AIR INLET	9”W X 10.5”H X 13.25”L
RECIEVER / SUMP	10” X 18” VERTICAL
SPIN-ON COALESCER FILTER	5” DIA
COOLER / FAN ASSEMBLY	12.00” X 16.60” X 2.63”
OIL COOLER/ AFTER COOLER FAN	12VDC, 22 AMP, 500 CFM @ 1/2” H20
AIRTANK	20 GALLONS
OIL FILTER	15 MICRONS ABSOLUTE

Specifications subject to change without prior notice

COMPRESSOR PANEL ASM (51717794-1)

1.	60124194	ELBOW, MOD TEMP SWITCH	1
2.	60127900	BRACKET-OIL FILTER (WAS 60124195)	1
3.	60124200	SHROUD-FAN	1
4.	60124204	BRACKET-COALESCER	1
5.	60124207	PANEL-COMPRESSOR MOUNT	1
6.	60124515	HEAD-COALESCER REWORK	1
7.	60124689	PLUG-BLOWDOWN	1
8.	60124691	BRACKET-CONTROL COMPRS.	1
9.	60124692	FILL PIPE-COMPRS. PANEL	1
10.	60124201	BRACKET-OIL FILL TUBE	1
11.	70048214	ELEMENT-OIL FILTER	1
12.	70048224	TEMP SENDER	1
13.	70146475	TUBE-COALESCER TO SUMP 1”	1
14.	70148455	TUBE ASM-COOLER TO TEE	1
15.	70148456	TUBE ASM-THRM VLV TO COOL	1
16.	70142021	TUBE ASM-COALS TO PRES VLV	1
17.	70148458	TUBE ASM-AFT-COOL TO TANK	1
18.	70148459	TUBE ASM-OIL FILT. -THERM VLV	1
19.	70733690	TANK SUMP 10X18	1
20.	70733695	FAN ASSEMBLY	1
21.	70733696	AIR TANK, 20-GAL	1
22.	72053013	NIPPLE-PIPE BLK 1/4XCLOSE	1
23.	72053141	NIPPLE-PIPE BLK 3/4XCLOSE (WAS 4, 2)	1
24.	72053145	NIPPLE-PIPE BLK 3/4X4.00	1
25.	72053286	ELBOW-STR BLK 1 X 90°	1
26.	72053287	ELBOW-STR BLK 1-1/4 X 90°	2
27.	72531826	RED BUSH STL 1/4-1/8 (WAS 72053371)	2
28.	72053392	PLUG-PIPE SOC HD 1/4	5
29.	72053458	NIPPLE-BARB BRS 3/4MPT 3/4	2
30.	72053555	TEE-STL 3/4	1
31.	72053556	ELBOW-STREET STL 3/4 X 90°	3
32.	72053676	ADPTR-MPT/MJIC 3/4-12	1
33.	72053679	ADPTR-MPT-MJIC 3/4-16	5
34.	72053680	ADPTR-MPT-MJIC 1.00-16 (WAS 1)	2
35.	72053682	ADPTR-MPT-MJIC 1.25-20	1
36.	72053522	ELBOW-STREET STL 1/2 X 45°	1
37.	72063005	WASHER 1/2 FLAT	2
38.	72531430	ELBOW MPT/MJIC 1.00-16 90° (WAS 5)	4
39.	72531833	RED BUSHING-STL 3/4-1/2	2
40.			
41.	72531837	RED BUSHING-STL 1-1/4 - 1.00 (WAS 1)	2
42.	72533726	TEE-MPIPE/FPIPE MALE RUN 1/4	4
43.	72534344	CROSS-PIPE 3/4” STEEL	1
44.	72534336	TEE-RED 3/4 X 1/2 X 3/4 BLACK	1
45.	72534419	ELBOW-NPT/90/PUSHLOK 6 2 (WAS 72534338)	1
46.	72534339	ELBOW-PRESTOLOK	4
47.	73540113	VALVE-THERMAL	1
48.	72534341	ELL-MPT/JIC 1.00-16 45° 16VTX-S	1
49.	72053376	RED BUSHING BLK 1.00 - 3/4	1

CONTINUED ON FOLLOWING PAGE

50.	73029602	HEAD-OIL FILTER	1
51.	73052128	COOLER	1
52.	73054032	VALVE-PRESS RLF 1/4 200 PSI	2
53.	73540109	VALVE-REGULATOR 1/4”	1
54.	73540110	VALVE-BLOWDOWN	1
55.	73540111	VALVE-MIN PRESSURE 3/4	1
56.	73540114	VALVE-DRAIN COCK 1/2”	1
57.	73733692	FILTER-COALESCER	1
58.	77041647	SWITCH-TEMP 3/8” 240 R NC	1
59.	77041638	SWITCH-PRESS 5 LB 1/8” N/C	1
60.	77041639	SWITCH-PRESS 20 LB 1/8” N/O	1
61.	77041645	SWITCH-TEMP 1/2” 180R NO	1
62.	72533235	ADPTR-FPT/MJIC 1.00-16	1
63.	60124690	CAP-VENTED 1”	1
64.	60124197	BRACKET-UPPER COOLER	1
65.	60124198	BRACKET-LOWER COOLER	1
66.	60124199	PANEL-SIDE COOLER	1
67.	72060046	CAP SCR 3/8-16 X 1.00 HH GR5Z (WAS 14)	8
68.	72062103	NUT 3/8-16 HEX NYLOC (WAS 32)	27
69.	72063003	WASHER 3/8 FLAT (WAS 29)	24
70.	77045896	HARNESS-AIR SYSTEM	1
71.	77041655	RELAY MODULE-AIR SYSTEM	1
72.	72053243	PLUG-PIPE SH HEX BLK 1/2	1
73.	72060023	CAP SCR 5/16-18 X 3/4 HH GR5	2
74.	72063050	WASHER 5/16 LOCK	2
75.	72063002	WASHER 5/16 FLAT (WAS 2)	6
76.	72062104	NUT 1/4-20 HEX NYLOC	6
77.	72060002	CAP SCR 1/4-20 X 3/4 HH GR5	6
78.	72060012	CAP SCR 1/4-20 C 3.00 HH GR5	2
79.	72063049	WASHER 1/4 LOCK	2
80.	72063001	WASHER 1/4 FLAT	6
81.	72661312	CLAMP-1/2 LOOP CUSHIONED	2
82.	72066581	CLAMP (WAS 5)	4
83.	72533756	FITTING-COMP 1/4MPT X 3/8TUBE	2
84.	72533747	TUBE-TEFLON P TFE 3/8OD HC NAT	9”
85.	72063000	WASHER 3/16 FLAT (WAS 4)	6
86.	70034472	TUBE NYLON 3/8 OD X .225 ID	38”
87.	72060636	SCR MACH 10-24 X 3/4 RDH Z	2
88.	72062106	NUT #10-24 HEX NYLOC ZINC	2
89.	72060047	CAP SCR 3/8-16X1.25 HHGR5Z (WAS 18)	20
90.	72053143	NIPPLE-PIPE BLK 3/4X2 (WAS 1)	2
91.	77045887	TERM-WP 14-16GA MALE	2
92.	70394069	SEAL WP/MP 16GA GREEN	2
93.	77044573	CONNECTOR WP 2CAV MALE/SH	1
94.	72053584	ELB 3/4MPT 3/4FPT 45DEG SWIV	1
95.	72053727	ADPTR 1MPT 3/4MPT HEX	1

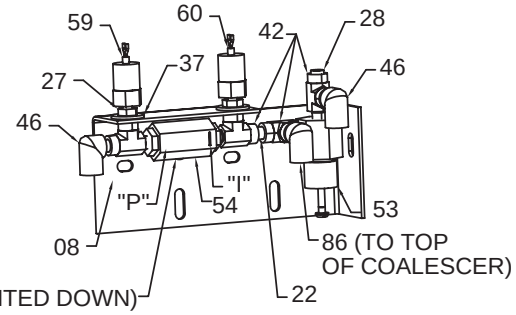
NOTE: Items 13-18 can be replaced with Parker series 206 hose.

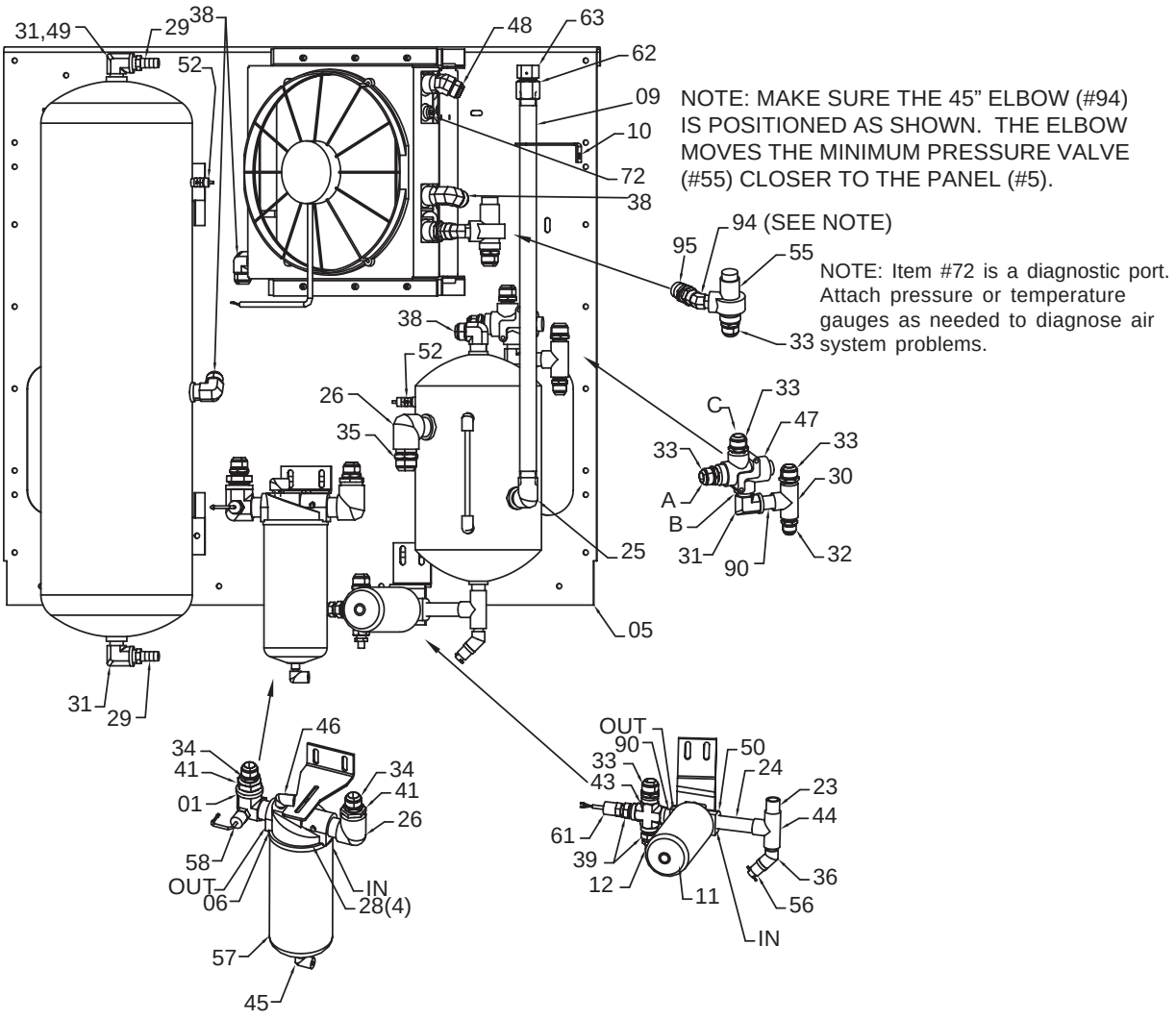
SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR PANEL ASM (51717794-2)

PARTS LIST ON PREVIOUS PAGE.
DRAWINGS CONTINUED ON FOLLOWING PAGE

ASSEMBLY NOTES:
1. Subassemble groups as shown.
2. Loosely mount components as shown on page 3.
3. Install tubing.
4. Make final connections and adjustments.
5. Finish tightening mounting hardware.

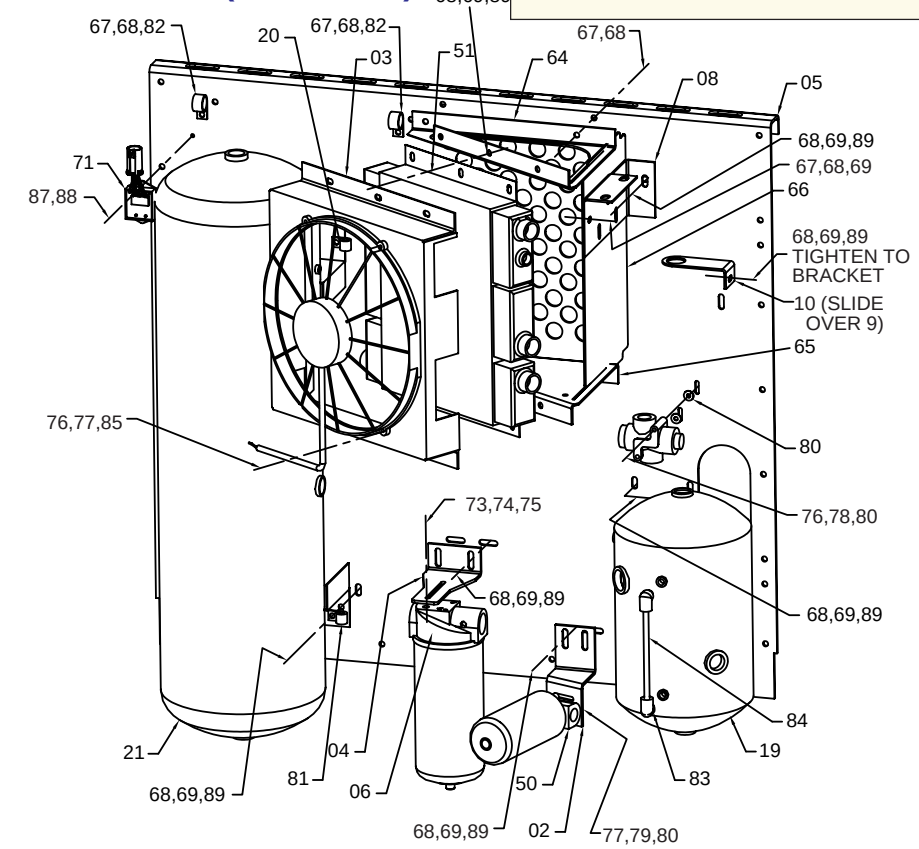


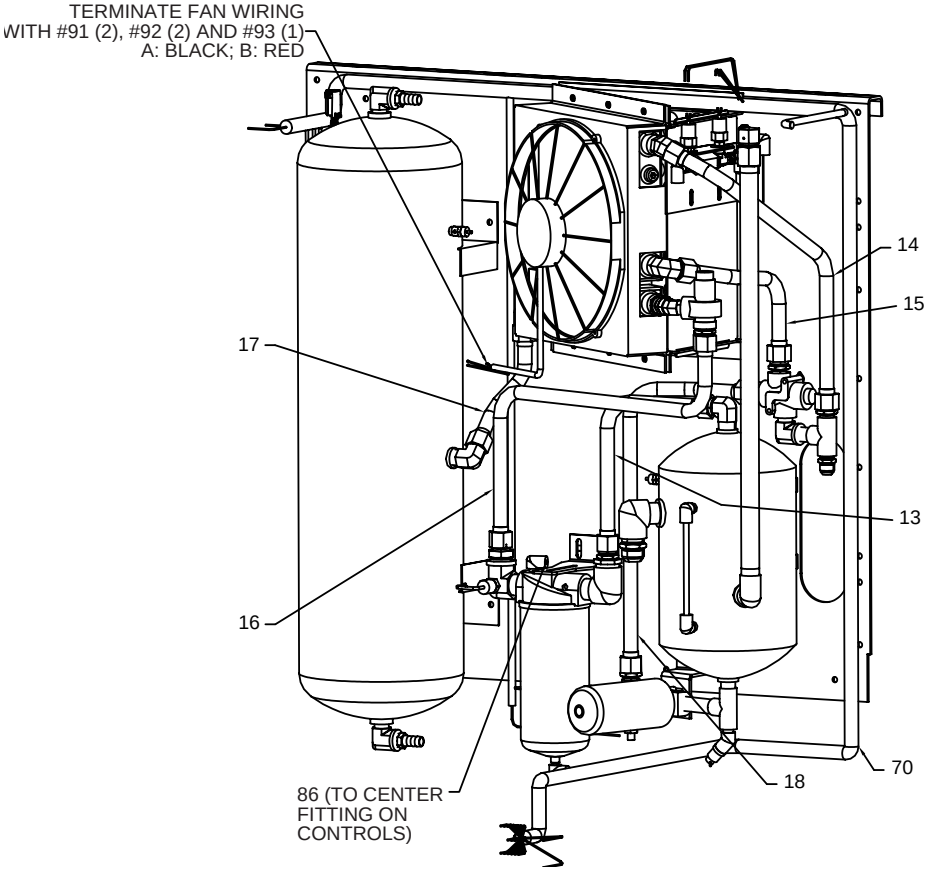


SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR PANEL ASM (51717794-3)

PARTS LIST ON PAGE 3A-3.

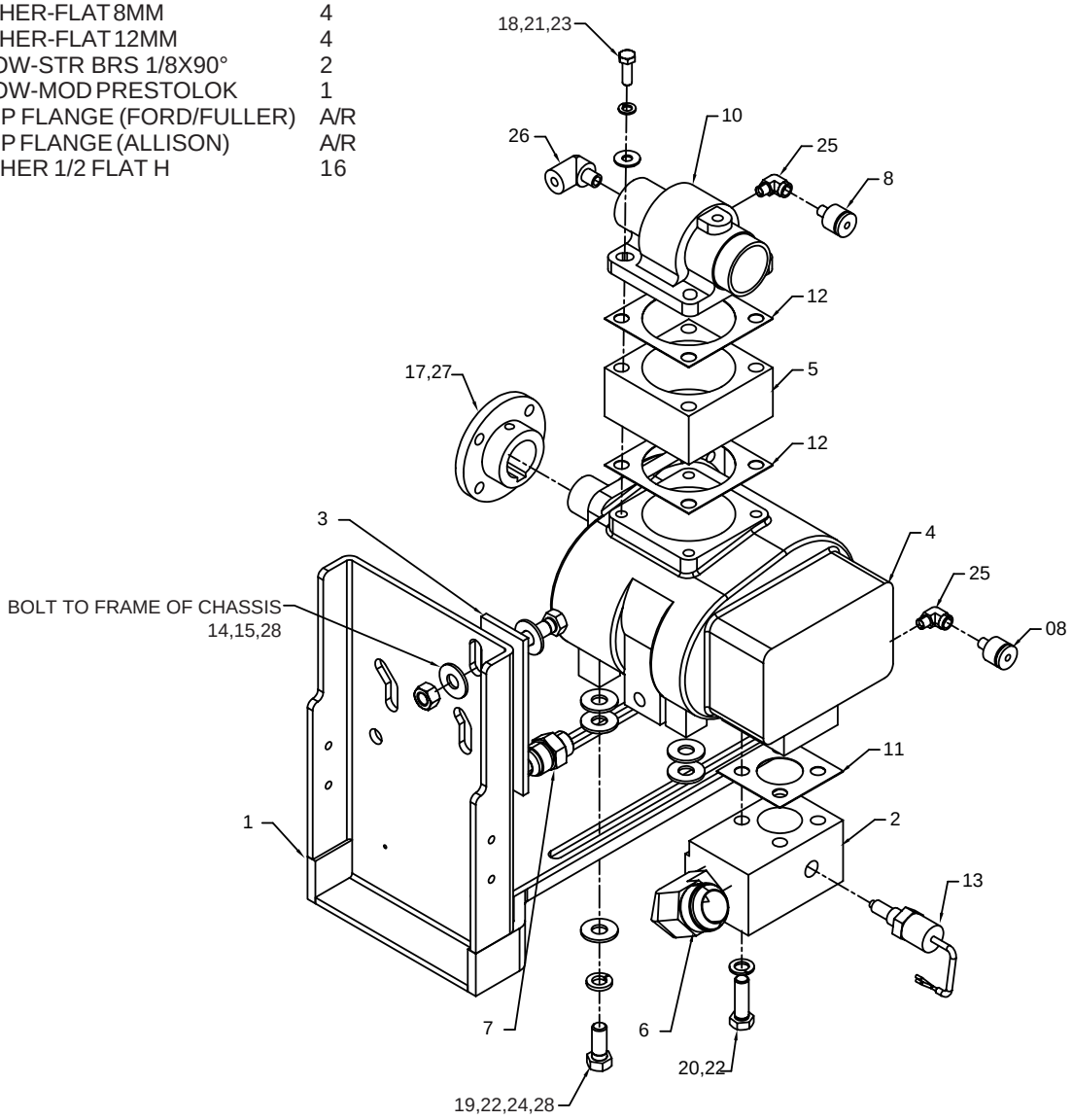




SERIAL NUMBERS PRED021074 TO PRESENT.

AIR END ASSEMBLY (99903452)

1.	52717346	COMP MTG FOOT-NON-G B101	A/R
	52717347	COMP MTG FOOT-NON FORD	A/R
2.	60124893	BLOCK-DISCH B101 W/PROBE	1
3.	60124694	SPACER COMP FT (FORD ONLY)	A/R
4.	70733693	AIR END B101 (FORD/FULLER)	A/R
	70733760	AIR END B101G-H (ALLISON)	A/R
5.	60125045	SPACER-AIR INTAKE B101	A/R
6.	72534343	ELBOW MPT/JIC 1.25-20 90°	1
7.	72533656	ADPTR #8MBSPP #12MJIC	1
8.	72534338	ADPTR-PRESTOLOK	2
10.	73540112	INLET VALVE	1
11.	76396253	DISCHARGE BLOCK GASKET	1
12.	76396269	INLET GASKET	A/R
13.	77041647	TEMP SWITCH 3/8" 240R	1
14.	72060118	CAP SCR 1/2-313 X 2.00 HHGR5	4
15.	72062232	NUT 1/2-13 HEX TOP LOCK GR8	4
17.	72060579	SET SCR 3/8-16 X 1/2 SH PL	1
18.	72601677	CAP SCR-MET 8-1.25 X 25 H10.9	A/R
	72601809	CAP SCR-MET 8-1.25X70 HHZ (WAS 72601263)	A/R
19.	72601394	CAP SCR-MET 12-1.25 X 30 HHZ	4
20.	72601496	CAP SCR-MET 12-1.75 X 80 HHZ	4
21.	72601797	WASHER-LOCK 8MM	4
22.	72601798	WASHER-LOCK 12MM	8
23.	72601799	WASHER-FLAT 8MM	4
24.	72601800	WASHER-FLAT 12MM	4
25.	72053589	ELBOW-STR BRS 1/8X90°	2
26.	60124756	ELBOW-MOD PRESTOLOK	1
27.	70580156	COMP FLANGE (FORD/FULLER)	A/R
	70580167	COMP FLANGE (ALLISON)	A/R
28.	72063132	WASHER 1/2 FLAT H	16

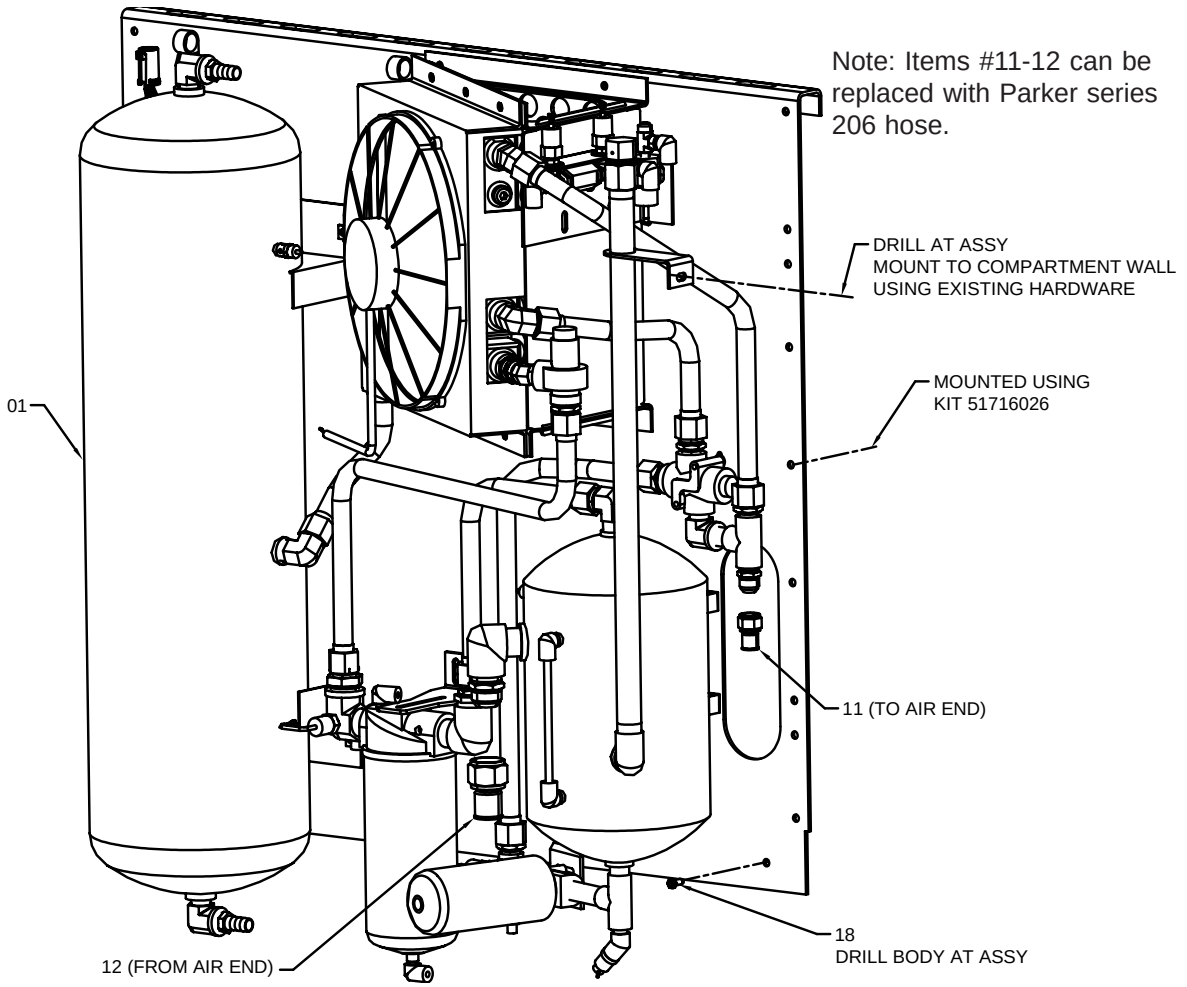


SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR INSTALLATION (99903453-1)

CONTINUED

1.	51717794	PANEL ASM	REF
2.	70048215	AIR FILTER ASM	1
3.	70048216	AIR FILTER BAND 4.8	1
4.	70048222	AIR FILTER INDICATOR	1
5.	70048223	AIR FILTER CAP 4.8	1
6.	76396153	RUBBER INSERT 2.5 X 1.75	1
7.	76396154	INSERT-INLET 2.5 X 2	1
8.	70396152	HOSE-2.5 ID GT	10’
9.	72661549	CLAMP INLET 2.5	2
10.	77041638	PRESS SWITCH 5# 1/8” N/C	A/R
11.	51396272	HOSE FJ 3/4X56.0 OAL (W/O CRANE)	A/R
	51396264	HOSE-FJ 3/4X80 OAL (W/CRANE)	A/R
12.	51396273	HOSE-FF 1.25X41.0 OAL (W/O CRANE)	A/R
	51396265	HOSE-FF 1.25X65.0 OAL (W/CR)	A/R
13.	70034472	TUBE-NYLON .375 OD X .225 ID	23’
14.	72053001	NIPPLE-1/8 X 1.50	1
15.	89086192	IMT COMP OIL-QT	10
16.	72053371	RED BUSHING 1/4-1/8	A/R
17.	99903452	AIR END ASM DRAWING	REF
18.	72060833	SCR THD CUT 5/16-18X3/4 HWH	4



SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR INSTALLATION (99903453-2)

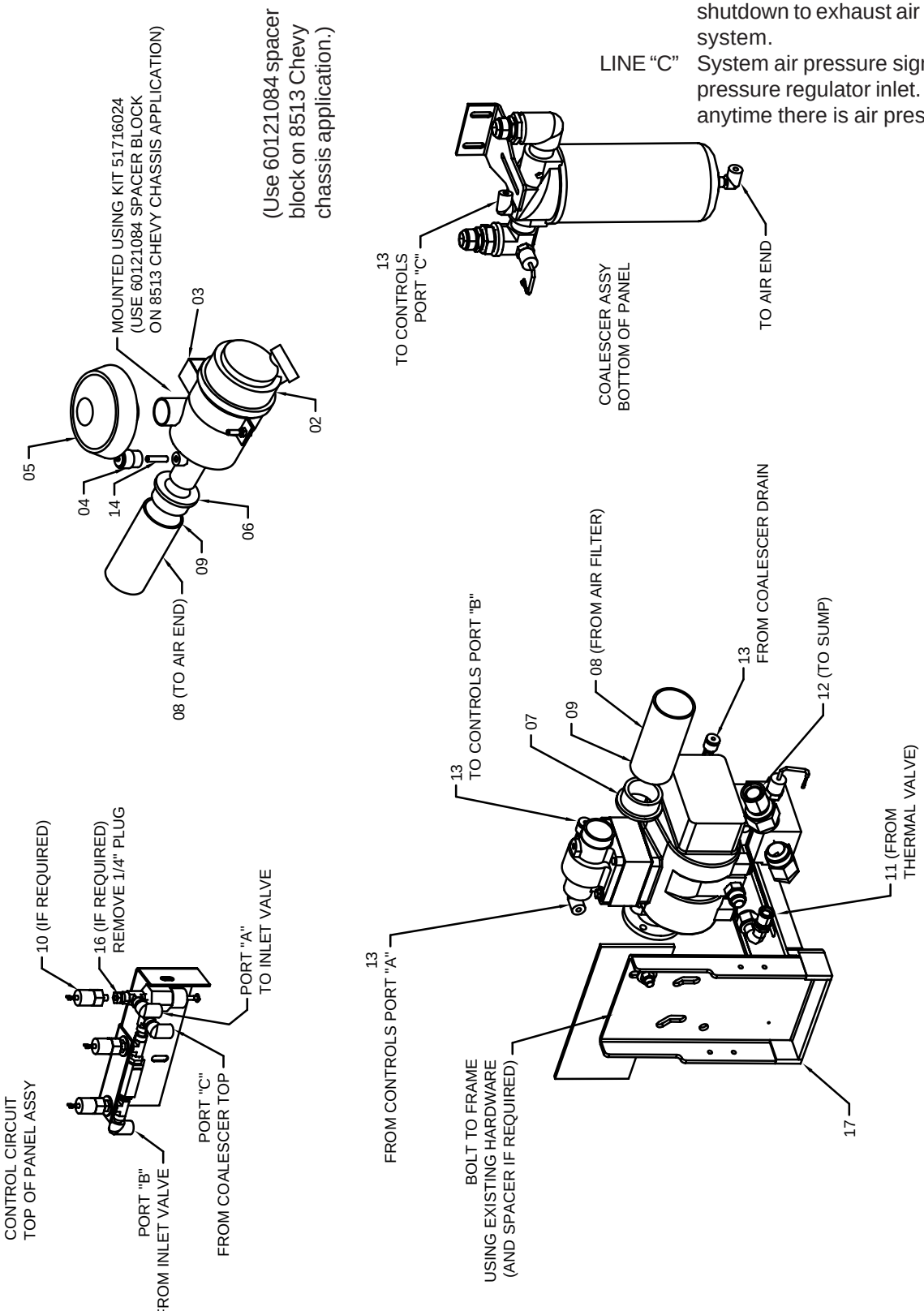
PARTS LIST ON PAGE 3A-8.

Control Hose Port Call Outs (REF)

LINE “A” Air signal from regulator outlet to compressor inlet valve regulating port. Air signal modulates air opening from open to close when there is no demand for air. Maximum pressure in this line is 50 psig.

LINE “B” Air signal supply from side of inlet valve at shutdown to exhaust air from compressor system.

LINE “C” System air pressure signal port air to air pressure regulator inlet. Air pressure is present anytime there is air pressure in the system.



SERIAL NUMBERS PRED021074 TO PRESENT.

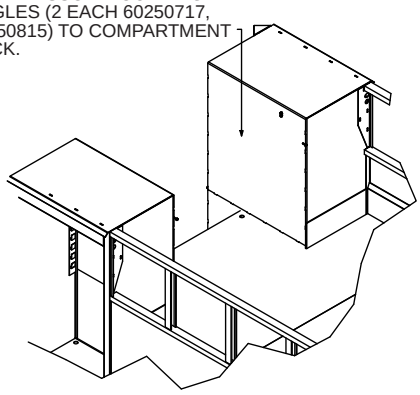
CAS440HT COMPRESSOR INSTALLATION (99903908)

1.	52717980	GATE	1
2.	52720046	LID	1
3.	23000080	COMPRESSOR, CAS440HT	1
4.	602511990	PANEL	1
5.	60109403	GATE STOP	2
6.	60109404	GATE HOLDER	2
7.	60010921	LATCH	2
8.	60251209	ANGLE	2

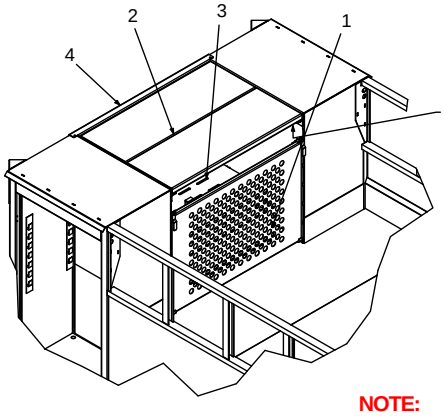
NOTES:

1. MOUNTING HARDWARE FOR BULKHEAD, GATE AND LID INCLUDED IN KIT 51720048.
2. INSTALL GATE WITH 5/16 FASTENERS.
3. INSTALL LID SUPPORT ANGLES WITH 3/8 FASTENERS.
4. SECURE LID IN PLACE WITH 5/16 FASTENERS.
5. INSTALL BULKHEAD WITH 3/8 FASTENERS.

DO NOT WELD STANDARD COMPRESSOR MOUNTING ANGLES (2 EACH 60250717, 60250815) TO COMPARTMENT BACK.



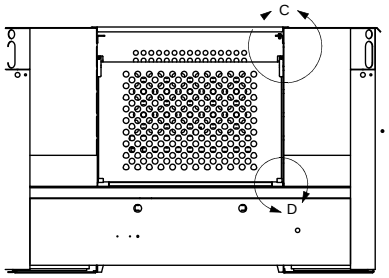
DETAIL FOR SPECIAL WELDING

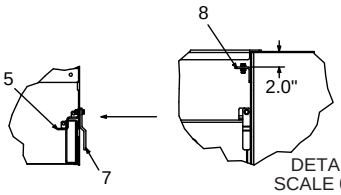


LID HELD DOWN WITH CAP SCREWS THAT SECURE LID (#3) TO ANGLE (#15)

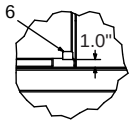
NOTE:

WHEN DRILLING HOLES FOR THE LARGE DEUTSCH ELECTRICAL CONNECTORS, MOVE THE HOLES DOWN TO MAINTAIN 5" OF COMPARTMENT SPACE ABOVE THE CONNECTORS, SO THERE IS SPACE TO MOUNT THE LID.

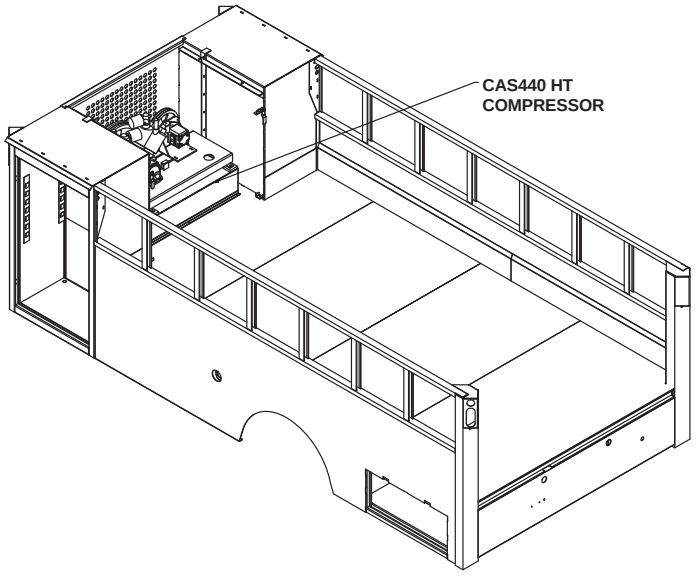




DETAIL C
SCALE 0.18:1



DETAIL D
SCALE 0.18:1

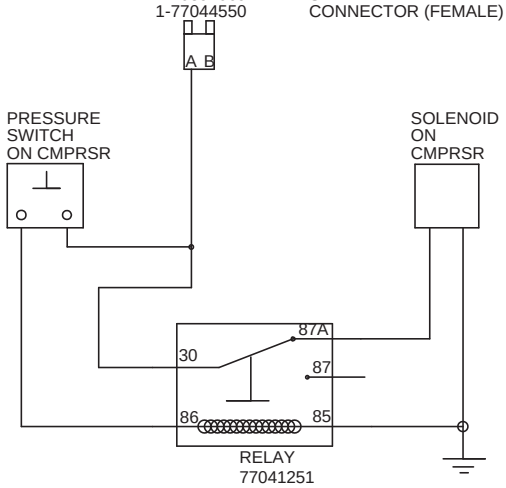


77441261 - HARNESS - PREDATOR TO CAS440HT COMPRESSOR

INSERT INTO THE HARNESS CONNECTOR THAT NORMALLY FEEDS TO 20# PRESSURE SWITCH OF THE BULKHEAD STYLE PREDATOR COMPRESSOR.

PARTS LIST:

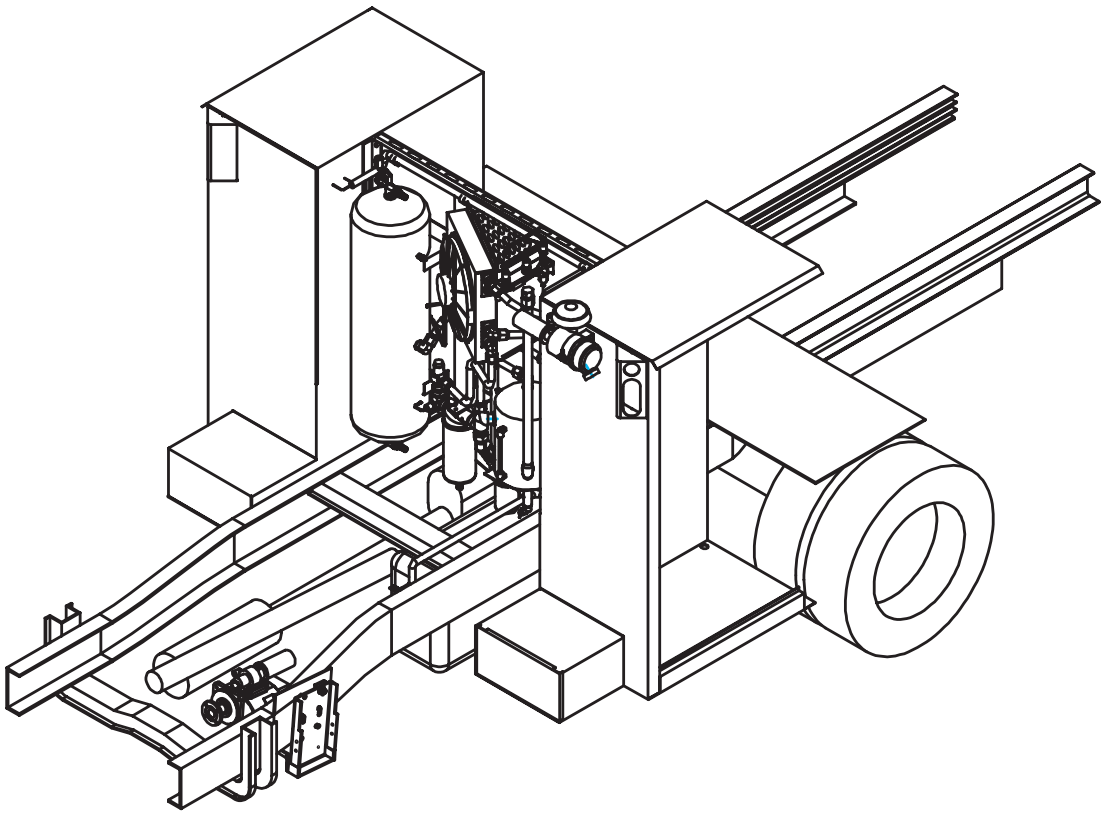
1-77044574	2-PIN WEATHERPACK (TOWER)
1-70394069	SEAL
1-77044550	CONNECTOR (FEMALE)



RELAY
77041251

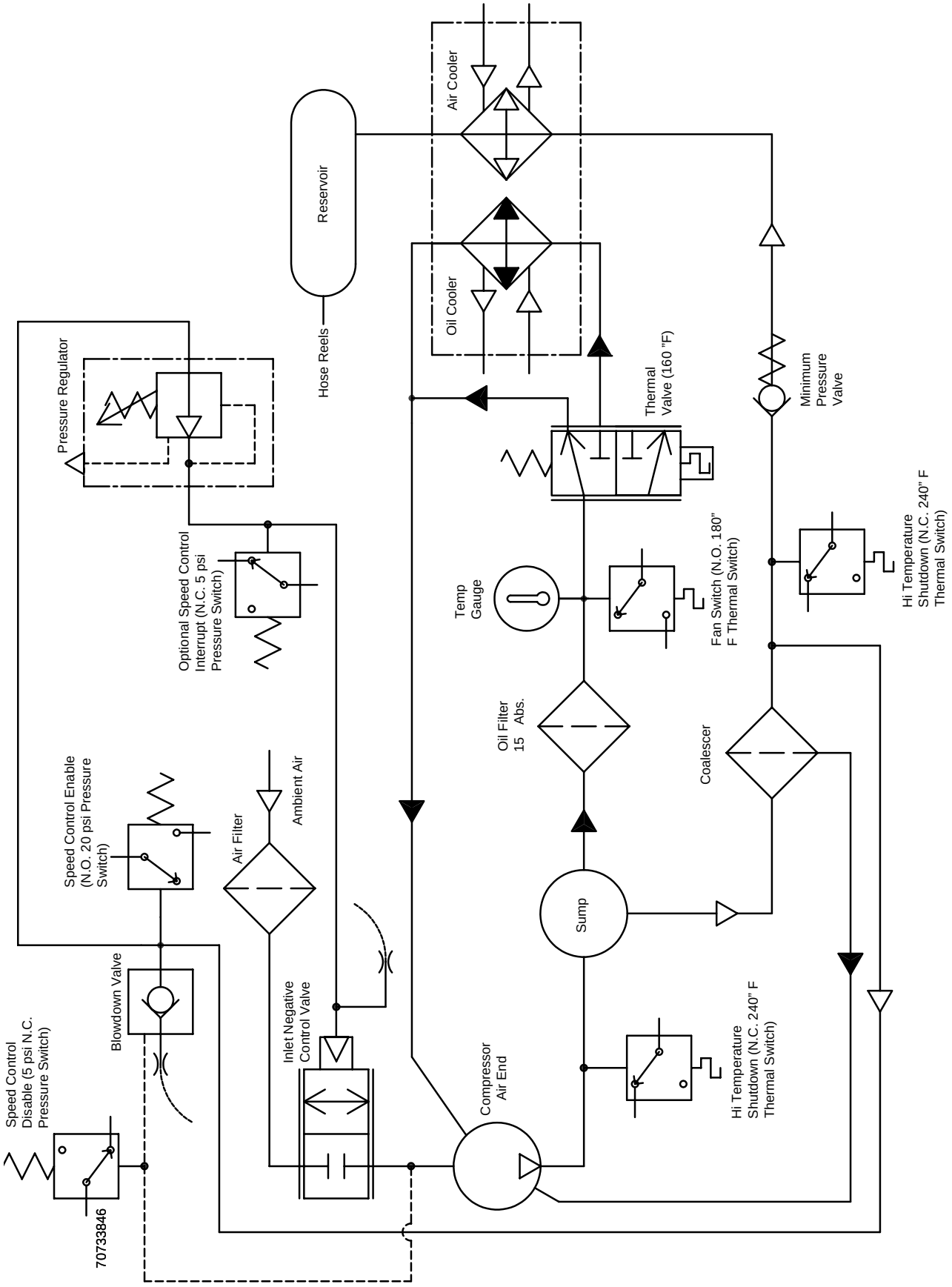
SCHEMATIC TO WIRE COMPRESSOR

TYPICAL INSTALLATION



SERIAL NUMBERS PRED021074 TO PRESENT.

HYDRAULIC SCHEMATIC (99903411)



SERIAL NUMBERS PRED021074 TO PRESENT.

CONTINUED

SAFETY INFORMATION

WARNING

All units are shipped with a detailed operators and parts manual. This manual contains vital information for the safe use and efficient operation of the unit. Carefully read the operators manual before starting the unit. Failure to adhere to the instructions could result in serious bodily injury or property damage.

AIR COMPRESSOR SAFETY PRECAUTIONS

Safety is basically common sense. While there are standard safety rules, each situation has its own peculiarities that cannot always be covered by rules. There fore with your experience and common sense, you are in a position to ensure your safety. Lack of attention to safety can result in: accidents, personal injury, reduction of efficiency and worst of all - Loss of Life. Watch for safety hazards. Correct them promptly. Use the following safety precautions as a general guide to safe operation:

Do not attempt to remove any compressor parts without first relieving the entire system of pressure.

DANGER

This compressor system is equipped with an air storage tank that remains pressurized even when the compressor is off. Relieve air storage tank pressure when servicing compressor or when not in use (i.e. during vehicle travel).

Do not attempt to service any part while machine is operating.

DANGER

Check the compressor sump oil level after each use. Turn off the compressor and relieve system pressure completely before adding or draining oil. To relieve system air pressure, open the service valve. Failure to comply with this warning may cause property damage and serious bodily harm.

Do not operate the compressor at pressure or speed in excess of its rating as indicated in “Compressor Specifications”

Periodically check all safety devices for proper operation.

Do not play with compressed air. Pressurized air can cause serious injury to personnel.

Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts by covering parts and exposed openings.

Do not install a shut-off valve between the compressor and compressor oil sump.

DANGER

Do not use IMT compressor systems to provide breathing air. Such usage, whether supplied immediately from the compressor source, or supplied to breathing tanks for subsequent use, can cause serious bodily injury.

IMT disclaims any and all liabilities for damage for loss due to personal injuries, including death, and/or property damage including consequential damages arising out of any IMT compressor used to supply breathing air.

Do not disconnect or bypass safety circuit system.

Do not install safety devices other than authorized IMT replacement devices.

Close all openings and replace all covers and guards before operating compressor unit.

Tools, rags, or loose parts must not be left on the compressor drive parts.

Do not use flammable solvents for cleaning parts.

Keep combustibles out of and away from the Compressor and any associated enclosures.

CONTINUED ON NEXT PAGE

SUB-ZERO TEMPERATURE OPERATION INSTRUCTIONS

CAUTION

READ AND UNDERSTAND THE SUB-ZERO TEMPERATURE OPERATION INSTRUCTIONS BELOW. DO NOT OPERATE COMPRESSOR WITH THE OIL TEMPERATURE BELOW 0º F.

Sub-Zero Operation

For IMT rotary screw compressors (both shaft driven and hydraulically driven) sub-zero temperature operation is defined as operation of the compressor when the oil temperature is below 0º F. It is possible to operate an IMT rotary screw compressor when the **ambient** temperature is below 0º F, but only by adhering to the following guidelines:

Maintenance Requirements

If the IMT rotary screw compressor is expected to operate at temperatures below 0º F, the oil filter, coalescer, air filter, and oil should be changed before the compressor is ran in sub-zero temperatures (ex: late fall, but this may vary by location and environment). Performing this maintenance will improve the performance of the system during sub-zero temperature operation. Use only IMT approved rotary screw compressor oils and filters.

Storage Requirements

The IMT rotary screw compressor should be stored at or above 0º F. If the ambient temperature is below 0º F the vehicle should be stored inside, preferably in a heated environment. After moving the vehicle from the heated environment, the compressor system should be operated for 15 minutes before proceeding to a job site. During this time, the service valve must be slightly ajar, such that the pressure gauge reads between 100 and 140 psi. This ensures that the oil temperature has had adequate time to come up to operating temperature, and that most of the water in the system has been removed. This will allow for approximately one hour of travel time before the oil cools to ambient temperature. If an extended driving time is expected, the operator may need to stop driving and run the system for 15 minutes every hour to ensure that the oil temperature does not cool to below 0º F. The operator should use his/her judgment when deciding what interval is needed between running the compressor to warm the oil. Lower ambient temperature will require more frequent warming of the compressor oil.

Failure to Follow Maintenance & Storage Requirements

At temperatures below 0º F, failure to follow the above guidelines may result overheating of the compressor due to the oil's inability to circulate through the compressor system. The lack of circulation leads to rapid warming of the compressor air end, and eventually the compressor air end will exceed the maximum operating temperature. If the system shuts down due to high temperature during sub-zero temperature operation, the oil will need to be warmed before restarting. This may require moving the vehicle to a heated location or waiting for the ambient temperature (and therefore the oil temperature) to exceed 0º F.

CAUTION

FAILURE TO ADHERE TO THESE GUIDELINES, AND REPEATED RUNNING OF THE COMPRESSOR TO HIGH TEMPERATURE SHUTDOWN, MAY RESULT IN PERMANENT DAMAGE TO THE AIR END.

CONTINUED

AIR COMPRESSOR SAFETY PRECAUTIONS

The owner, lessor, or operator of the Compressor are hereby notified and forewarned that any failure to observe these safety precautions may result in damage or injury.

IMT expressly disclaims responsibility or liability for any injury or damage caused by failure to observe these specified precautions or by failure to exercise that ordinary caution and due care required when operating or handling the Compressor, even though not expressly specified above.

SAFETY INFORMATION

A compliment of warning decals is supplied with each unit. These decals must be affixed to the vehicle after it has been painted, trimmed, and undercoat, etc. and prior to being put into service. The decals shall be placed so as to be clearly visible to the user and service personnel.

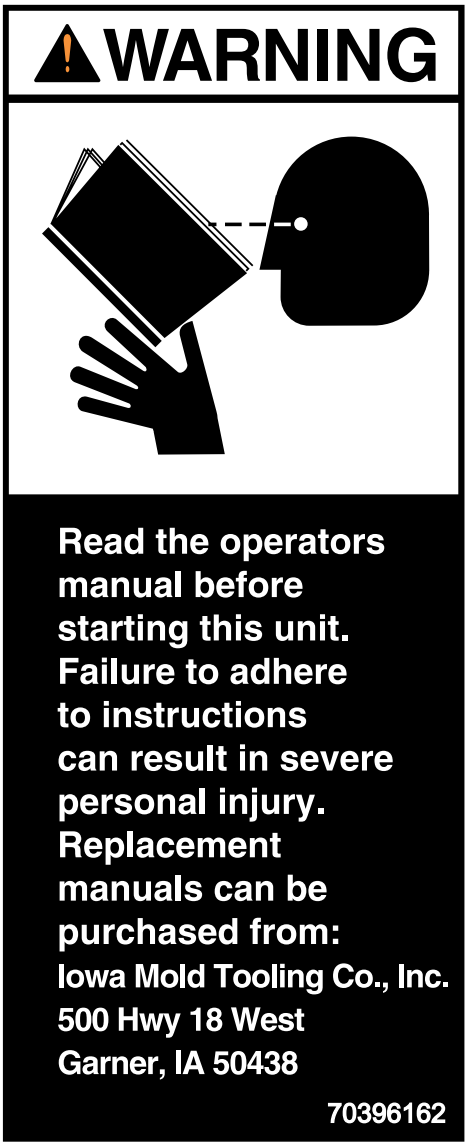


Figure 1. To be placed on visor or dash near start-up procedure decal.

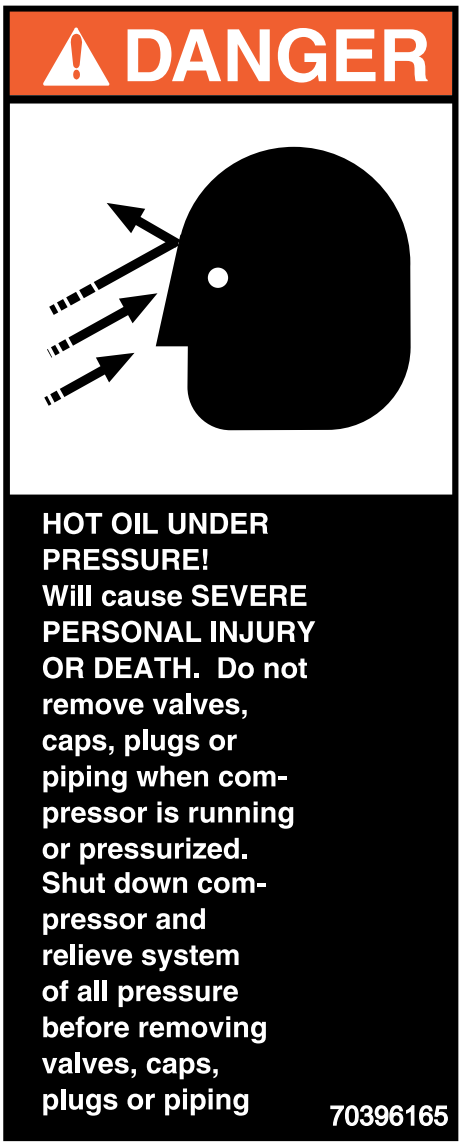


Figure 2. To be placed on body near oil sump filler cap.

SAFETY INFORMATION

CONTINUED

Figure 3. To be placed on body near air service valve.

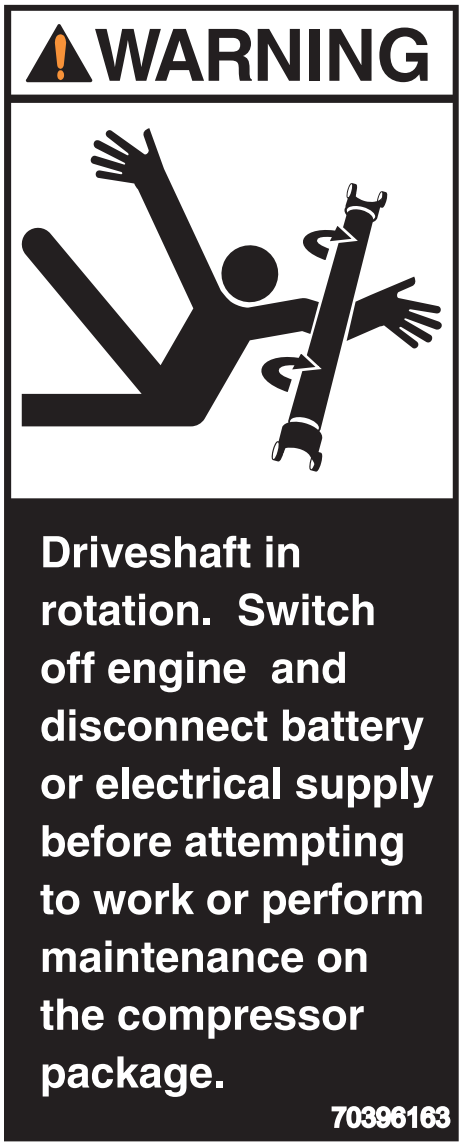


Figure 4. To be placed on body near compressor mounting foot.

SAFETY INFORMATION

COMPRESSOR FLUID

USE IMT ROTARY SCREW COMPRESSOR FLUID ONLY.

1. CHECK FLUID LEVEL WITH TRUCK OFF AND PARKED ON LEVEL GROUND. FLUID SHOULD BE WARM.
2. ADD FLUID IF NONE IS SHOWING IN SIGHTGLASS.
3. DO NOT FILL ABOVE LINE ON SIGHTGLASS.

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IMT

Air Compressor Operating Instructions

- Set the parking brake.
- Close air tank drain.
- Engage the PTO.
- Operate the air compressor at least 15 minutes each time the compressor is started. This will reduce moisture build-up and winter freeze-ups.
- After disengaging the compressor, relieve system pressure and check oil level.
- Wait at least two minutes between compressor shutdown and startup to allow the blow-down cycle to complete.
- See the manual for complete operating instructions.

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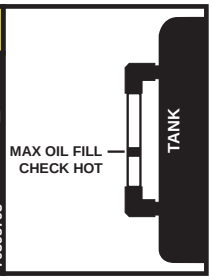
CAUTION

DO NOT OVERFILL.
Check warm oil with engine off.
If oil is not visible, add oil until oil is visible in tube.



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DIRECTION OF ROTATION

70396167

SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR TERMINOLOGY

ATF
Automatic transmission fluid.

AIR/OIL COALESCER
Performs second stage separation of oil from compressed air feeding air tools. Sometimes referred to as the separator element.

CFM
Refers to the volume of compressed air being produced expressed as cubic feet of air per minute.

IMT SPEED CONTROL
Sometimes referred to as the engine speed control.

OIL SUMP
The first stage of oil separation from compressed air. Also serves as reservoir area for compressor lubricant and sometimes referred to as the receiver tank.

PSI
Refers to the operating pressure the system is set up at, expressed as pounds per square inch.

SAFETY VALVE
A valve located on the oil sump which opens in case of excessive pressure. Sometimes referred to as the pop-off or pressure relief valve.

SHUTDOWN SWITCH
Works in conjunction with a power relay, sending a signal to stop the compressor power source in cases of high temperature. Power relay incorporates an additional wire for remote engine/speed control kill.

SIDE MOUNT PTO
Power take off gearbox that bolts to the side of the transmission. The PTO input gear meshes with one of the gears in the vehicle's transmission. The rotation developed by the engine drives the transmission which turns the PTO gear box and rotates the PTO output shaft.

DESCRIPTION OF COMPONENTS

CONTINUED

COMPRESSOR ASSEMBLY
The IMT PTO compressor assembly is a positive displacement, oil flooded, rotary screw type unit employing one stage of compression to achieve the desired pressure. Components include a housing (stator), two screws (rotors), bearings, and bearing supports. Power from the engine is transferred to the male rotor through a drive shaft and gears in the gear housing. The female rotor is driven by the male rotor. There are four lobes on the male rotor while the female rotor has five roots.

PRINCIPLES OF OPERATION
In operation, two helical grooved rotors mesh to compress air. Inlet air is trapped as the male lobes roll down the female grooves, pushing trapped air along, compressing it until it reaches the discharge port in the end of the stator and delivers smooth-flowing, pulse-free air to the receiver.

During the compression cycle, oil is injected into the compressor and serves these purposes:

1. Lubricates the rotating parts and bearings.
2. Serves as a cooling agent for the compressed air.
3. Seals the running clearances.

LUBRICATION SYSTEM
Oil from the compressor oil sump, at compressor discharge pressure, is directed through the oil filter, cooling system, and to the side of the compressor stator, where it is injected into the compressor. At the same time oil is directed internally to the bearings and shaft seal of the compressor. The oil-laden air is then discharged back into the sump.

OIL SUMP
Compressed, oil-laden air enters the sump from the compressor. As the oil-laden air enters the sump, most of the oil is separated from the air as it passes through a series of baffles and de-fusion plates. The oil accumulates at the bottom of the sump for recirculation. However, some small droplets of oil remain suspended in the air and are passed on to the coalescer.

RELIEF VALVE
The pop relief valve is set at 200 PSI and is located at the top of the air/oil sump. This valve acts as a backup to protect the system from excessive pressure that might result from a malfunction.

AIR/OIL COALESCER
The coalescer is self-contained within a spin-on housing and is independent of the sump. When air is demanded at the service line, it passes through the coalescer which efficiently provides the final stage of oil separation.

OIL RETURN LINE
The oil that is removed by the coalescer accumulates at the bottom of the canister and is returned through an oil return line to the compressor. The oil return line is 1/4” and goes to an elbow hose fitting which is located at the compressor.

MINIMUM PRESSURE VALVE
The minimum pressure valve is located at the outlet of the coalescer head and serves to maintain a minimum discharge pressure of 65 PSIG in operation, which is required to assure adequate compressor lubrication pressure.

OIL FILTER
The compressor oil filter is the full-flow replaceable element type and has a safety bypass built into it.

DESCRIPTION OF COMPONENTS

COMPRESSOR COOLING SYSTEM
The compressor cooling system consists of a remote mounted oil/air cooler with an electric fan. The fan is activated through a latching relay, so it will not turn off until the compressor is disengaged and the system pressure is fully relieved, or when the engine is turned off. The thermal valve will divert oil to the oil cooler at 160°F.

ELECTRICAL AND SAFETY CIRCUIT SYSTEM
The IMT PTO unit is supplied with an hourmeter, wire harness and shutdown. Engine shutdown occurs in the event of high compressor temperature.

AUTOMATIC BLOW DOWN VALVE
There is one blow down valve in the compressor system. It is located at the top of the panel on the cooler side, and will automatically bleed the sump to atmospheric pressure when the compressor is disengaged. Blow down time interval takes between 30 to 60 seconds

CONTROL SYSTEM
The prime component of the compressor control system is the compressor inlet valve. The control system is designed to match air supply to air demand and to prevent excessive discharge pressure when compressor is at idle. Control of air delivery is accomplished by the inlet valve regulation and modulation as directed by the discharge pressure regulator.

DISCHARGE PRESSURE REGULATOR VALVE
This valve, located on the top of the panel near the oil fill pipe, is used to set the desired discharge pressure within the operating pressure range. Turning the regulator screw clockwise increased the working pressure, a counterclockwise movement of the screw reduces the working pressure. This system has a maximum operating pressure of 150 psi.

NOTE

Most air tools operating pressure range is between 90 and 125 psi. Operating above the tools recommended pressure will decrease the life of the tool. Higher operating pressure can also over torque nut and bolts fatiguing the fastener and mating parts. Strictly adhere to tool operating pressures and torque standards set forth by the tool manufacturer and the specifications of the equipment that work is being performed on.

INLET VALVE
The compressor inlet valve is a piston operated disc valve that regulates the inlet opening to control capacity and serving as a check valve at shutdown.

AIR AFTERCOOLER
The Air Aftercooler is a second chamber of the oil cooler. Air leaving the compressor enters the aftercooler. Temperature of the air is reduced to approximately 4-7°F above ambient temperature. Condensation is directed to the air tank, where it is collected.

CONTROL SYSTEM OPERATION
The following discussion explains the operation of the control system from a condition of “no load” to a condition of “full capacity” at working pressure. For the working pressure range of your machine, refer to applicable data in “Specifications”.

The pressure regulator, mounted at the top of the panel near the oil fill pipe, operates as follows:

1. As the demand for air decreases, the receiver pressure rises. When this pressure exceeds the set point of the pressure regulator, the regulator opens sending a secondary pressure signal to the inlet valve. The poppet valve moves towards the valve inlet against the force of the modulating spring inside the valve. This regulates the opening area of the inlet valve.

2. If the air demand goes to zero, (service valve closed or air dead headed at tool) the inlet valve will close completely.

3. As the demand for air increases, the secondary pressure signal to the inlet valve is removed and the inlet valve poppet modulates to full open.

INSPECTION, LUBRICATION, AND MAINTENANCE

This section contains instructions for performing the inspection, lubrication, and maintenance procedures required to maintain the compressor in proper operating condition. The importance of performing the maintenance described herein cannot be over emphasized.

The periodic maintenance procedures to be performed on the equipment covered by this manual are listed below. It should be understood that the intervals between inspections specified are maximum interval. More frequent inspections should be made if the unit is operating in a dusty environment, in high ambient temperature, or in other unusual conditions. A planned program of periodic inspection and maintenance will help avoided premature failure and costly repairs. Daily visual inspections should become a routine.

The LUBRICATION AND MAINTENANCE CHART lists serviceable items on this compressor package. The items are listed according to their frequency of maintenance, followed by those items which need only “As Required” maintenance.

The maintenance time intervals are expressed in hours. The hourmeter shows the total number of hours your compressor has run. Use the hourmeter readings for determining your maintenance schedules. Perform the maintenance at multiple intervals of the hours shown. For example, when the hourmeter shows “100” on the dial, all items listed under “EVERY 10 HOURS” should be serviced for the tenth time, and all items under “EVERY 50 HOURS” should be serviced for the second time, and so on.

DANGER

Compressor must be shut down and completely relieved of pressure prior to checking fluid levels. Open service valve to ensure relief of system air pressure. Failure to comply with this warning may cause damage to property and serious bodily harm.

LUBRICATION AND MAINTENANCE CHART

INTERVAL	ACTION
PERIODICALLY DURING OPERATION	1. Observe all gauge reading. Note any change from the normal reading and determine the cause. Repair as necessary. Notes: "Normal" is the usual gauge reading when operating at similar conditions on a day-to-day operation.
EVERY 10 HRS (DAILY)	1. Check compressor oil level. 2. Check air filter. Pressure drop indicator while compressor is operating. 3. Check for oil and air leaks. 4. Check safety circuit switches.
EVERY 25 HRS (MONTHLY)	1. Drain water from compressor oil.
EVERY 100 HRS	1. Grease compressor drive shaft.
EVERY 500 HRS (6 MONTHS)	1. Change compressor oil and oil filter. 2. Check compressor shaft seal for leakage. 3. Check air filter piping, fittings and clamps. 4. Check compressor supports. 5. Install new air filter element. Shorter interval may be necessary under dusty conditions. 6. Check sump safety valve.
EVERY 1000 HRS (1 YEAR)	1. Change coalescer element.
PERIODICALLY (AS REQD)	1. Inspect and clean air filter element. 2. Inspect and replace spin-on coalescer element if necessary. 3. Inspect and clean oil cooler fans.

NOTE

Compressor oil and filter is to be changed after the first 50 hours of operation. After this, normal intervals are to be followed.

LUBRICANT RECOMMENDATIONS

WARNING

It is important that the compressor oil be of a recommended type and that this oil, as well as the air filter, oil filter, and coalescer elements be inspected and replaced as stated in this manual.

The combination of a coalescer element loaded with dirt and oxidized oil products together with increased air velocity as a result of this clogged condition may produce a critical point while the machine is in operation where ignition can take place and could cause a fire in the oil sump.

Failure to comply with this warning may cause damage to property and serious bodily harm.

The following are general characteristics for IMT rotary screw lubricant. Due to the impossibility of establishing limits on all physical and chemical properties of lubricants which can affect their performance in the compressor over a broad range of environmental influences, the responsibility for recommending and consistently furnishing a suitable heavy duty lubricant must rest with the individual supplier if they choose not to use the recommended IMT rotary screw lubricant. The lubricant supplier's recommendation must, therefore, be based upon not only the following general characteristics, but also upon his own knowledge of the suitability of the recommended lubricant in PTO helical screw type air compressors operating in the particular environment involved. The owner of this equipment should contact the factory if IMT rotary screw lubricant is not used as supplied with this equipment.

CAUTION

Mixing different types or brands of lubricants is not recommended due to the possibility of a dilution of the additives or reaction between additives of different types.

IMT specified rotary screw lubricant shipped with your kit contains additives for rust, corrosion and anti-wear inhibitors. Use of any other lubricant is not recommended.

LUBRICANT CHARACTERISTICS

1. Flash point 450°F minimum
2. Pour point -55°F.
3. Contains rust and corrosion inhibitors.
4. Contains foam suppressors.
5. Contains oxidation stabilizer.

NOTE

Due to environmental factors, the useful life of all 'Extended Life' lubricants may be shorter than quoted by the lubricant supplier. IMT encourages the user to closely monitor the lubricant condition and to participate in an oil analysis program with the supplier.

NOTE

No lubricant, however good and/or expensive, can replace proper maintenance and attention. Select and use lubricant wisely.

MAINTENANCE

If some of the maintenance intervals in the schedule outlined in this manual seem to be rather short, it should be considered that one hour's operation of a compressor is equal to about 40 road miles on an engine. Thus, eight hours operation is equal to 320 road miles, 250 hours is equal to 10,000 road miles, etc.

COMPRESSOR OIL SUMP FILL, LEVEL, AND DRAIN

Before adding or changing compressor oil make sure that the system is completely relieved of pressure. Oil is added at the fill cap located at the top of the compressor panel next to the air/oil cooler assembly. A drain valve is provided at the bottom of the sump. The proper oil level when the system pressure is relieved and the compressor is warm from running is at the midpoint of the oil sightglass. The truck must be level when checking the oil. DO NOT OVERFILL. The oil sump capacity is given in "Compressor Specifications".

DANGER

Do not attempt to draw in condensate, remove the oil level fill plug, or break any connection in the air or oil system without first shutting off compressor and manually relieving pressure from the sump and air storage tank. Failure to comply with this warning may cause damage to property and seriously bodily harm.

AIR INTAKE FILTER

The air intake filter is a heavy-duty two-stage dry type high efficiency filter designed to protect the compressor from dust and foreign objects.

The filter is equipped with an evacuator cup for continuous dust ejection while operating and when stopped.

Frequency of maintenance of the filter depends on dust conditions at the operating site. The filter element must be serviced when clogged (maximum pressure drop for proper operation is 15" H20). The filter is equipped with a pressure drop indicator, and the element should be changed based on it's reading first and then by the maintenance intervals outlined.

AIR/OIL COALESCER

The air/oil coalescer employs an element permanently housed within a spin-on canister. This is a single piece unit that requires replacement when it fails to remove the oil from the discharge air, or pressure drop across it exceeds 15 PSI. Dirty oil clogs the element and increases the pressure drop across it.

To replace element proceed as follows:

1. Shutdown compressor and wait for complete blow down (zero pressure).
2. Disconnect drain line and fitting.
3. Turn element counterclockwise for removal (viewing element from bottom).
4. Install new rubber seal in head and supply a film of fluid directly to seal.
5. Rotate element clockwise by hand until element contacts seal (viewing element from bottom).
6. Rotate element approximately one more turn clockwise with band wrench near the top of element.
7. Reconnect drain line and fitting.
8. Run system and check for leaks.

NOTE

When connecting drain line, make sure tubing is fully inserted into fitting.

WARNING

Do not substitute element. Use only a genuine IMT replacement element. This element is rated at 200 psi working pressure. Use of any other element may be hazardous and could impair the performance and reliability of the compressor, possibly voiding the warranty and/or resulting in damage to property and serious bodily harm.

MAINTENANCE

OIL RETURN LINE
This line originates at the bottom of the air/oil coalescer and flows through a 1/4" Prestolok fitting located at the air-end.

OIL FILTER
The compressor oil filter is a spin-on, throw away type.

To replace filter proceed as follows:

1. Make sure system pressure is relieved.
2. Remove filter by unscrewing from filter head (turn counterclockwise by hand viewing from bottom) and discard.
3. Install a new filter by applying a little oil to the seal and then screw the filter on by hand (turning it clockwise until hand tight, plus one - third turn viewing from bottom). Do not use tools to tighten the filter.
4. Check for leaks in operation.

WARNING

Do not substitute element. Use only a genuine IMT replacement element. This element is rated at 200 psi working pressure. Use of any other element may be hazardous and could impair the performance and reliability of the compressor, possibly voiding the warranty and/or resulting in damage to property and serious bodily harm.

OIL COOLER
The interior of the oil cooler should be cleaned when the pressure drop across it at full flow exceeds 25 PSI.
The following procedure has been recommended by the vendor who supplies the cooler:

1. Remove cooler.
2. Circulate a suitable solvent to dissolve and remove varnish and sludge.
3. Flush generously with IMT compressor lubricant.
4. After cooler is reinstalled and compressor is filled with fresh oil, change compressor oil after 50 hours of normal operation.

PTO SHAFT SEAL INSTALLATION INSTRUCTIONS

1. Remove pto drive shaft, companion flange and key.
2. Remove (4) socket head metric bolts on cover and slide cover off shaft.
3. Pull seal wear sleeve off shaft with puller, adding heat to one area only on wear sleeve will help enlarge and aid in it's removal.
4. Clean shaft and surface of bearing remove all burrs from shaft where the wear sleeve gets installed.
5. Press new wear sleeve on to shaft. Oil heating new wear sleeve to 212°F approximately aids in the installation of this ring.
6. Press old shaft seal out of cover and clean cover for assembly of new seal.
7. Press new seal into cover (included in repair kit).
8. Apply silicone to outside diameter of assembly tool and slide assembly onto drive shaft until it touches the wear sleeve (tool and silicone included in repair kit).
9. Install cover, new o-ring, new seal assembly, over shaft and assembly tool. Note: Assembly tool is slip fit on shaft and allows new seal in cover to slide on to wear sleeve without cutting the lip of shaft seal. One new cover is on the assembly tool.
10. Bolt cover on squarely and slide off assembly tool.
11. Reinstall drive line assembly.

NOTE

The seal cover is installed using an o-ring gasket. Care should be taken to not pinch the o-ring out of it's groove upon reinstallation.

MAINTENANCE

PTO

The PTO should be serviced in accordance with the PTO manual. The SAE side-mount type of PTO is lubricated by the transmission oil and thus requires little maintenance. It is strongly recommended that you periodically torque the fasteners in accordance with the PTO manual.

HYDRAULIC PUMP OPTION (Model 8511 on Ford 450-550 & model 8513 on Ford 350-450 Auto-Trans ONLY)

The single cog belt arrangement is sized for an average life of 1000 hours. This time frame can be increased or decreased depending on the end users periodic maintenance schedule. Drive belt tension should be checked for adjustment every 100 hours there after. Belt deflection is to be checked at midpoint between both pulleys. Belt deflection is to be 1/8" at 3.5 lbs. Minimum to 5.0 lbs. Maximum.

BELT TENSION - Belt tension is accomplished as follows:

1. Loosen the 3/8" bolts that attach the hydraulic pump to mounting plate. Pump should now pivot free on bottom mounting bolt.

2. Pivot hydraulic pump until the correct deflection is accomplished. Hold pump in the position until the two 3/8" bolts are retightened.

NOTE

Over-tensing belt can damage compressor and hydraulic pump. When tensing belt all hardware should be broken loose only to the point in which the hydraulic pump can pivot.

COMPRESSOR TROUBLESHOOTING GUIDE

Your IMT Predator compressor is equipped with a lighted relay module which will help you diagnose problems with your compressor. Use the lights on the module to assist you in troubleshooting. If the compressor unexpectedly shuts down, restart the engine and watch the lights on the relay module. The relay module is located on the compressor panel assembly on the left side of the air tank.

1) Cooler Fan Light:

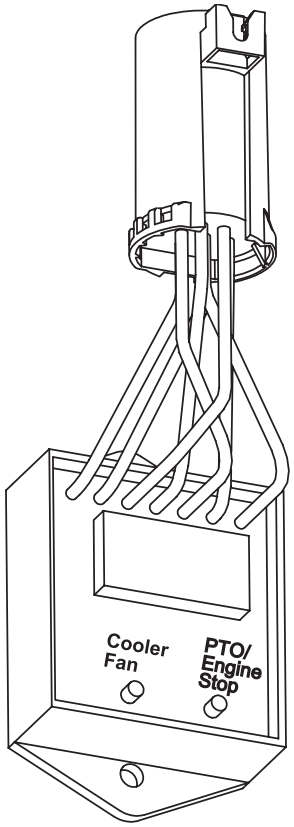
The compressor cooler fan should turn on when the compressor temperature exceeds 180°F. The fan will remain on until the compressor is disengaged and the system pressure is fully relieved (or when the engine is turned off).

2) Engine Stop Light:

- If the engine stop light is on, the truck engine should shut down. This may indicate that the compressor is over temperature or that an electrical component has been damaged or failed. Check the temperature gauge and/or electrical components.

- If the engine stop light is on and the truck engine does not shut down, there may be a wiring problem. Check the wiring to the module.

- **For Ford Super Duty Chassis with automatic transmissions:** The engine stop light will only be active for a few seconds after engine shutdown mode is invoked. This occurs because the relay module loses power when the engine is killed. The PTO will be disengaged and the engine may kill.



Compressor Relay Module

SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR TROUBLESHOOTING GUIDE

TROUBLE	CAUSE	WHAT TO DO
Compressor does not make air.	Air tank drain open.	- Close tank drain valve.
	Blow down valve stuck.	- Remove blow-down valve, clean out, reassemble.
	PTO not engaged.	- Engage PTO per instructions.
Compressor/truck shuts down. Note: Check the light module as described on the previous page to begin troubleshooting when the compressor / truck shuts down.	High air end temperature. - Check oil temperature using temperature gauge.	- Check oil level. Add as required per filling instructions. Do not overfill. - Wait for the compressor to cool down. Restart the truck and compressor. If the truck shuts down again, continue with trouble shooting below.
	Fan not operating.	- Insure that cooling fan is operating. If not, check fuse in harness next to fan and fan relay. See also speed control below.
	Air flow.	- Insure that cooler does not have any obstruction to airflow. - Check air cooler core. Clean as necessary. - High ambient air temperature. Contact IMT Technical Support.
	Leaks.	- Check for air leaking from tank or blow down fittings.
	Safety system failure.	- Check high temperature shut down circuitry for proper operation. - Check needle position on temperature gauge when compressor is cool. If the needle is not all the way to the left, replace the gauge.
	Thermal valve failure.	- Check thermal valve for proper operation. Bypass valve if in doubt to verify failure.
	Oil flow restricted.	- Check oil filter head for blockage (ex: by-pass valve in filter head). - Remove hoses and check for blockage.
Low system pressure	Air tank drain open.	- Close tank drain valve.
	Dirty air filter.	- Check filter condition. Replace as required.
	Air leak.	- Check air system fittings.
	Pressure control valve stuck.	- Remove, dissemble, clean. Reassemble and install.
	Inlet valve not fully open.	- Inspect and repair. Check control system operation.
	System demands exceed compressor delivery.	- Reduce air demand and/or consumption. Do not operate multiple tools at a time.
Coalescer filter plugging	Excessive water in system.	- Reduce short run (i.e.: less than 15 minute) times. Run compressor for at least 15-20 minutes each time it is started. - Drain water from sump-tank monthly, more if in humid conditions.
	Foreign material entering compressor inlet.	- Check air inlet hose from the air filter. Replace if damaged.

SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR TROUBLESHOOTING GUIDE

TROUBLE	CAUSE	WHAT TO DO
High oil consumption/oil in air system.	Excessive oil level.	- Check level per filling instructions. Drain excessive oil if necessary.
	Plugged coalescer filter.	- Replace coalescer filter.
	Compressor operating at low pressure (60 psi or below).	- Operate at rated pressure. - Reduce system load.
	Compressor oil leak.	- Inspect and repair leaks.
	Leaking oil lines or oil cooler.	- Inspect and repair all oil lines and/or cooler.
	Leaking compressor shaft seal.	- Replace seal.
	Plugged coalescer return line.	- Inspect and clean hose and connections between coalescer filter and air end.
Water in air system.	Defective moisture separator/drain trap.	- Inspect and clean if required. Replace separator/trap if required.
	Air cooler core dirty.	- Inspect and clean.
	Air tank not drained.	- Open tank drain. (This should be done each time the compressor is run, prior to driving the truck.)
	Excessive moisture in compressor oil.	- Let truck sit overnight. Open petcock/drain valve on compressor sump tank until oil starts to drain. Close valve and check oil lever per filling instructions.
Excessive noise level.	Incorrect engine speed.	- Check engine speed and speed control operation. Check per specified speed. If speed control is not working properly, con tract IMT Technical Support.
	Low oil level.	- Check oil level per filling instructions. Fill as required.
Excessive vibration.	Loose components.	- Inspect and tighten.
	Compressor bearing failure.	- Contact authorized Distributor or IMT immediately, do not operate unit.
	Incorrect driveshaft angle.	- Check driveshaft angle per installation manual or contact IMT.
	Drive shaft u-joint failure.	- Inspect and repair as needed. Do not operate unit until repairs have been made. Damage to the chassis or compressor and/or serious injury could occur if driveshaft or u-joint breaks.
Shaft seal leak.	Defective Seal.	- Replace per service manual or contact authorized Distributor or contact IMT Technical Support.
Pressure relief valve opens.	Compressor operating over pressure.	- Inspect and verify pressure control valve and control circuitry.
		- Remove, disassemble, and clean pressure control valve. Reassemble and reinstall.
	Defective valve.	- Replace valve.
	Coalescer filter plugged up.	- Replace filter.
Sump pressure does not blow down.	Automatic blow down valve may be inoperative at coalescer head.	- Inspect and repair/replace blow down valve.
		- Remove, disassemble, and clean blow down valve. Reassemble and reinstall.

SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR TROUBLESHOOTING GUIDE

TROUBLE	CAUSE	WHAT TO DO
Speed control does not come up.	Parking brake is not set. Blown fuse. Compressor is not making air. No signal to speed control module from compressor.	- Engage parking brake. - Check and replace 5 amp fuse located behind panel in right front compartment. - Insure that PTO is engaged and that the pto shaft is turning. - With compressor running, check for 12 volts across 20lb pressure switch (N.O.). If switch is not closing, replace switch. - With the compressor off, check for 12 volts across 5lb pressure switch (N.C.). If switch does not close, replace switch.
Speed control comes on when engaging the parking brake with the pto off.	20lb pressure switch.	- With the compressor off, check for 12 volts across 20lb pressure switch (N.O.). If switch is not open, replace switch.
Compressor has experienced a “flash”.	Low oil level, high operating temperature, or oil starvation.	- See above for “What to Do”. - Check oil level per filling instructions. Fill as required. - See Flash Recovery Procedure in manual.
Excessive blowdown time.	Blowdown valve stuck. Min. pressure valve stuck open.	- Replace blowdown valve. - Replace valve.
Air tank empties upon	Min. pressure valve stuck open.	- Replace valve.
Oil discharges from blowdown	Bad seal in blowdown valve. Improper blowdown valve installation	- Replace seal. - Remove and reinstall per parts manual.

FLASH RECOVERY PROCEDURE FOR 45 CFM ROTARY COMPRESSOR

The following highlights the steps required to flush system when it has flashed.

1. Flush air compressor and check for rotor grinding.
   (a) Remove 2½" inlet hose from inlet valve and remove the driveshaft.
   (b) Drain sump tank.
   (c) Remove 1-1/4" hose from side of oil sump tank.
   (d) Place the 1-1/4" hose at same height of inlet valve and fill inlet of compressor with clean IMT specified oil. Once full, lower hose into bucket and rotate compressor by hand to evacuate any remaining oil. Repeat until oil is clean. Make sure the compressor turns freely by hand and that there is no grinding present.
   (e) Reinstall drive shaft.

2. Flush oil sump tank
   (a) Leave the 1-1/4" hose from the compressor flush procedure off. Loosen tank-mounting bands, disconnect and mark all hoses and remove oil tank. Remove tank.
   (b) Fill tank with IMT specified oil, until about half full. Slosh oil from end to end, then drain out oil at drain plug in bottom of tank. Check drain-plug and tee for any restrictions, (i.e. chunks of hose).
   (c) Reinstall tank and install the filler tube.

3. Flush oil cooler
   (a) Replace both tubes from cooler to thermal valve.
   (b) Inspect that the plastic shroud and fan blades are intact. Put power direct to red lead (ground black lead) at fan motor to verify that motor works. Do not run the motor outside of the shroud. Leave package assembled. Fan is a puller style, verify that air from fan blows out towards cab of truck.
   (c) Replace 1-1/4" hose from compressor to oil sump tank.
   (d) Replace all filters, air, oil and coalescer.
   (e) Re-connect all hoses and add IMT specified oil to proper level in tank.

4. Test safety circuit
   (a) Start truck. Disconnect temperature switch underneath the truck at the air end discharge. Attempt to start the truck with the PTO engaged. The truck should NOT start. If it does, DO NOT PROCEED! Contact IMT Technical Support. If the truck does not start, reconnect the temperature switch.
   (b) You should be ready to start air compressor for testing. Start truck; engage PTO, run compressor for five minutes. Drain oil, change oil filter, fill oil to proper level, and finish testing.

COMPRESSOR OPERATION

CONTINUED

STARTING/STOPPING

An operating procedure decal is furnished with every PTO Compressor. The decal should be attached to the dashboard or visor of the truck where it will be visible to the driver. Cable shift PTO's require the use of decal 70396160. Hot shift PTO's are to use decal 70396166. Both decals are supplied with your kit. Install the appropriate decal based on the type of PTO used.

The following decals are samples.

THIS TRUCK IS EQUIPPED WITH A

PTO COMPRESSOR PACKAGE

START UP PROCEDURE

1. SET BRAKES PER COMPANY PROCEDURES AND CHOCK WHEELS.
2. DEPRESS CLUTCH. ENGAGE PTO.
3. PUT TRANSMISSION IN NEUTRAL.
4. LET OUT CLUTCH. DEPRESS FUEL PEDAL MOMENTARILY.

SHUTDOWN PROCEDURE

1. CLOSE SERVICE VALVE.
2. DEPRESS CLUTCH AND HOLD FOR COMPRESSOR BLOWDOWN.
3. DISENGAGE P.T.O.

70396160

THIS TRUCK IS EQUIPPED WITH A

PTO COMPRESSOR PACKAGE

START UP PROCEDURE

1. STOP VEHICLE AND ENGAGE PARKING BRAKES.
2. SHIFT TRANSMISSION TO PARK. ENGAGE PTO.
3. ENGAGEMENT WILL BE COMPLETE WHEN RED INDICATOR LIGHT COMES ON.

SHUTDOWN PROCEDURE

1. CLOSE SERVICE VALVE.
2. DISENGAGE PTO.

70396166

SERIAL NUMBERS PRED021074 TO PRESENT.

COMPRESSOR OPERATION

Before starting the PTO/compressor, read this section thoroughly. Familiarize yourself with the controls and indicators, their purpose, location, and use.

CONTROL OR INDICATOR	PURPOSE
HOURMETER	Indicates accumulated hours of actual compressor operation.
FLUID LEVEL SIGHT TUBE	Indicates fluid level in the sump. Proper level should be between indicator marks on tube. Check this level when the compressor is disengaged and the vehicle is parked on level ground.
PRESSURE RELIEF VALVE	Vents sump pressure to the atmosphere if the pressure inside the sump exceeds 200 psi.
COMPRESSOR INLET CONTROL VALVE	Regulates the amount of air intake in accordance with the amount of compressed air being used. Isolates fluid in compressor unit on shutdown.
PRESSURE REGULATING VALVE	Senses air pressure from sump to provide automatic regulation of the compressor inlet control valve and load controller
BLOW DOWN VALVE	Coalescer head blow down valve vents the sump pressure to the atmosphere at shut down.
MINIMUM PRESSURE VALVE	Restricts air flow to balance sump and service air pressure. Assures a minimum of 65 psi to maintain compressor lubrication.
RELAY MODULE:	Activates / regulates fan operation and engine kill. Also indicates with LED's when fan operation and/or engine kill are active.

COMPRESSOR OPERATION-FORD F-SERIES W/AT

OPERATING INSTRUCTIONS

Air Compressor When Mounted on Ford F-Series with 5-Speed Automatic Transmission

TO OPERATE:

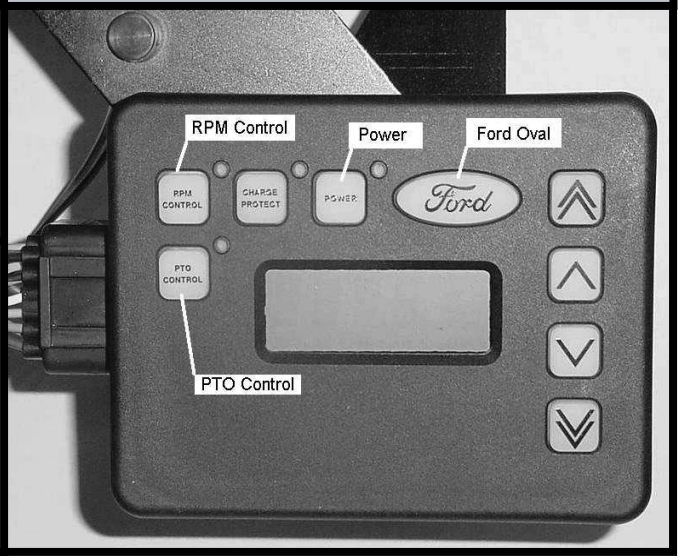
1. **With transmission in "Park", set the parking brake.**
2. **Press POWER button on control module.**
3. **Press RPM CONTROL.**
4. **Press FORD oval to activate PTO.**
5. **PTO is now operational.**

TO SHUT DOWN:

1. **Press RPM CONTROL or PTO CONTROL button.**
2. **Press POWER button.**
3. **PTO and Control Module are now disengaged.**
4. **Parking brake may now be released.**

70396381

AUXILIARY POWER CONTROL MODULE



OPERATING CONDITIONS

The following conditions should exist for maximum performance of the PTO/compressor. The truck should be as close to level as possible when operating. The compressor will operate on a 15 degree sideward and length wise tilt without any adverse problems.

NOTE

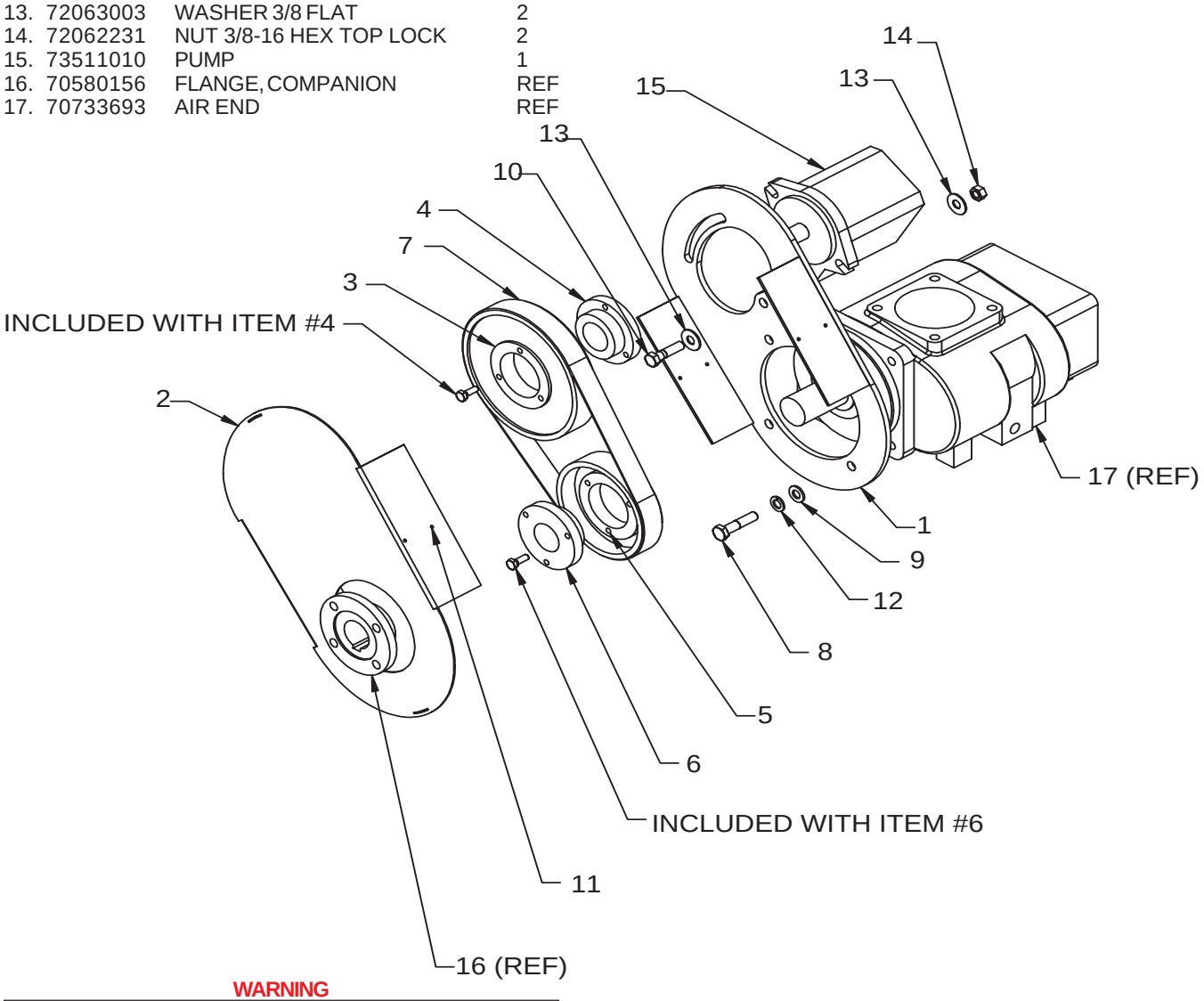
The compressor service valve should be relocated to the hose reel inlet or be the customer's air connection port when a hose reel is not used. Typical plumbing from minimum pressure valve should flow in the following order:

1. Minimum pressure valve.
2. Air tank.
3. Service valve.
4. Moisture trap/gauge/oiler combination
5. Hose reel.

SERIAL NUMBERS PRED021074 TO PRESENT.

PTO AND DRIVELINE SYSTEM - FORD AUTOMATIC TRANSMISSION W/ CRANE (51717828)

1.	52717348	BRACKET- PUMP FORD AUTO	1
2.	60124205	COVER-PULLEY	1
3.	71056584	PULLEY-PUMP	1
4.	71056585	FLANGE	1
5.	71056586	PULLEY - DRIVESHAFT	1
6.	71056587	FLANGE-DRIVESHAFT	1
7.	70580157	BELT	1
8.	72601518	CAP SCR MET 10-1.50 X 30 HH	4
9.	72063226	WASHER - 10 MM FLAT	4
10.	72060870	CAP SCR 3/8-16 X 1.50 HHGR8	2
11.	72601803	SCR-SELF TAP 8-18 X 1/2 HH	4
12.	72063227	WASHER - 10 MM LOCK	4
13.	72063003	WASHER 3/8 FLAT	2
14.	72062231	NUT 3/8-16 HEX TOP LOCK	2
15.	73511010	PUMP	1
16.	70580156	FLANGE, COMPANION	REF
17.	70733693	AIR END	REF

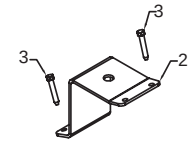


WARNING

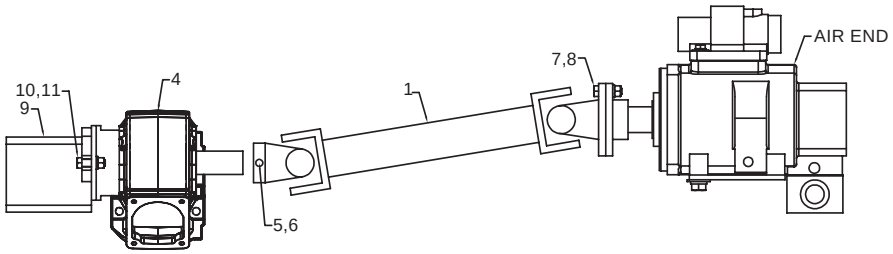
THE INSTALLER OF THE DRIVELINE MUST INSPECT THE FINAL POSITION OF THE DRIVELINE TO DETERMINE WHETHER ITS LOCATION PROVIDES SUFFICIENT PROTECTION TO AN OPERATOR, OR OTHER PERSONNEL, FROM HAZARDS ASSOCIATED WITH A ROTATING DRIVELINE. IF PROTECTION IS INSUFFICIENT, THE INSTALLATION OF A GUARD IS REQUIRED. IF YOU ARE UNSURE OF METHODS TO GUARD A ROTATING DRIVELINE, CALL IOWA MOLD TOOLING CO., INC. FOR INSTRUCTIONS. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.

SERIAL NUMBERS PRED021074 TO PRESENT.

PTO DRIVELINE INSTALLATION



ON FLOOR OF CAB
FOR MOUNTING PTO SHIFT CABLE



				Ford 6-Speed Manual w/Crane (51717827)	Ford 7.3L Auto w/Crane (51717828)	Ford 6.0L Auto w/Crane (51718034)	Ford 6-Speed Manual - No Crane (51717829)	Ford 7.3L Auto - No Crane (51717830)	Ford 6.0L Auto - No Crane (51718035)	Allison (51717846)	Fuller FS-5406A & FS-6406A (51717866)	Fuller FSO-6406A (51717886)	GMC 4500/5500 w/Allison 1000 (51718358)	Freightliner M2 with Allison 1000 (51718525)	Chevy 4500/5500 with Duramax (51718597)
1.	70580153	DRIVELINE	1	X	X			X							
	70580154	DRIVELINE					X								
	70580166	DRIVELINE								X				X	
	70580169	DRIVELINE				X			X						
	70580174	DRIVELINE										X	X		
	70580175	DRIVELINE													X
2.	60124767	BRACKET	1	X			X				X	X			
3.	72617557	SCR-SELF TAP 1/8X1.50 HH	4	X			X				X	X			
4.	70570882	PTO (WAS 70570680)	1	X											
	70570576	PTO	1		X			X							
	70570884	PTO (WAS 70570681)	1				X								
	70570743	PTO	1							X					
	(WAS 70570682 ON ALLISON ENGINES THROUGH 9/2/03)														
	70570742	PTO	1											X	
	70570746	PTO	1										X		X
	70570592	PTO	1								REF				
	70570634	PTO	1									REF			
	70570714	PTO	1			X			X						
5.	72060860	SET SCR 3/8-16X3/4 SQHD	1	X	X	X	X	X	X	X	X	X	X	X	X
6.	70058882	WIRE-MECH 18 GA	1'	X	X	X	X	X	X	X	X	X	X	X	X
7.	72601802	CAP SCR 3/8-24X1.25 HHGR8	4	X	X	X	X	X	X	X	X	X	X	X	X
8.	72062300	NUT 3/8-24 NYLOC	4	X	X	X	X	X	X	X	X	X	X	X	X
9.	73511011	PUMP	1	X											
10.	72060116	CAP SCR 3/8-16X1.24 HHGR8	2	X											
11.	72063225	WASHER 3/8 LOCK	2	X											
	51717931	HOSE KIT	1							REF			REF	REF	REF
	70146436	FITTING-ALLISON SAE #2	1							X			X	X	X

SERIAL NUMBERS PRED021074 TO PRESENT.

RECOMMENDED SPARE PARTS LIST

VP8500 (FOR UNITS WITH CRANES)

PART NUMBER	DESCRIPTION	QUANTITY
70048214	OIL FILTER	2
70048209	ELEMENT AIR FILTER (FLR)	2
73052006	ELEMENT HYD FILTER	2
89086201	COMPRESSOR OIL - GALLON	6
73733692	COALESCER	1
70048217	AIR FILTER	2
89086159	GREASE TUBE	1

VP8501 (FOR UNITS WITHOUT CRANES)

PART NUMBER	DESCRIPTION	QUANTITY
70048214	OIL FILTER	2
70048209	ELEMENT AIR FILTER (FLR)	2
89086201	COMPRESSOR OIL - GALLON	6
73733692	COALESCER	1
70048217	AIR FILTER	2

SERIAL NUMBERS PRED021074 TO PRESENT.

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ELECTRICAL INSTALLATION (41715741-1) 4
ELECTRICAL INSTALLATION (41715741-2) (1999 ONLY) 5
ELECTRICAL INSTALLATION (41715741-2) (1/2000 THRU PRED021073) 6
ELECTRICAL INSTALLATION (41715741-2) (021074 - 7/6/03) 7
ELECTRICAL INSTALLATION (41715741-2) (EFFECTIVE 7/7/03) 8
ELECTRICAL INSTALLATION (41715741-3) (1999 ONLY) 9
ELECTRICAL INSTALLATION (41715741-3) (JAN 2000 - 021073) 10
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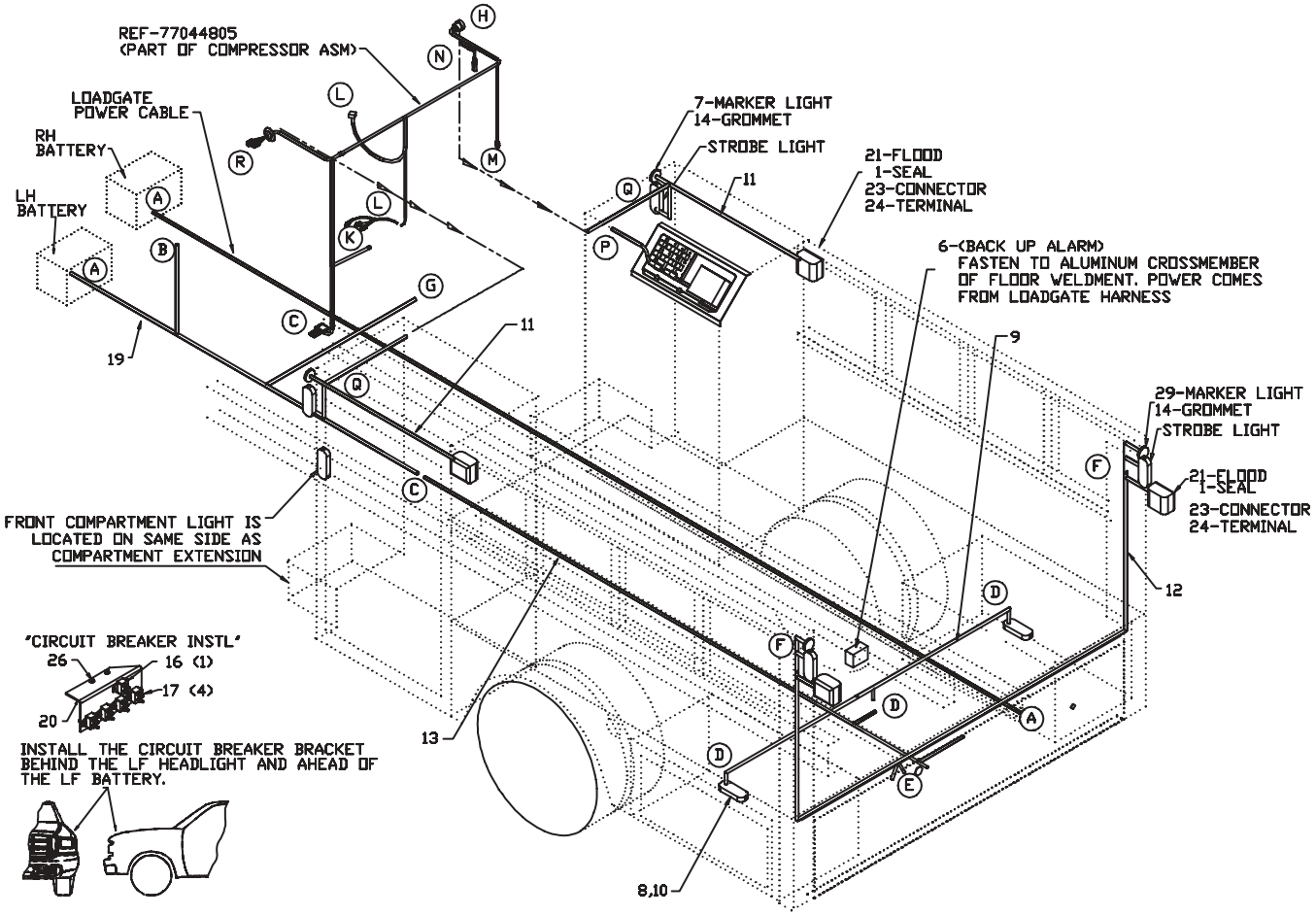
PTO WIRING - ALLISON T1000/T2000 TCM 2 PTO (99903409-2) 27
PTO WIRING - ALLISON T3000/T4000 TCM 1 PTO (99903409-3) 28
PTO WIRING - ALLISON T3000/T4000 TCM 2 PTO (99903409-4) 29
PTO WIRING - ALLISON T1000/T2000 TCM 1 PTO -FREIGHTLINER (99903409-5) 30

ELECTRICAL INSTALLATION (41715741-1) (1999 ONLY)

1.	70394069	SEAL	13
2.	77044550	TERMINAL-FEM 18-20GA	REF
3.	77044623	CONNECTOR 4-WAY	REF
4.	70145522	SPRING RETAINER	20
5.	72661491	CLIP	8
6.	77040020	BACKUP ALARM	1
7.	77040358	LIGHT-CLEAR AMBER	2
8.	77040384	LIGHT-COMPARTMENT 12V 2.1A	4
9.	77044703	WIRING HARNESS	1
10.	76394572	GROMMET	4
11.	77044804	HARNESS-FRONT COMPARTMENT	2
12.	77044912	HARNESS-REAR FLOOD/STROBE	1
13.	77044911	HARNESS-POWER/MAIN	1
14.	76393636	GROMMET	4
15.	77044689	CONNECTOR 1-WAY	1
16.	77040391	RELAY 12VDC 75A	REF
17.	77044672	CIRCUIT BREAKER 40A	REF

CONTINUED ON FOLLOWING PAGE

18.	70733297	IDLE CONTROL	REF
19.	77041575	HARNESS-CHASSIS/POWER	REF
20.	60250624	BRACKET-CIRC BRKR	REF
21.	77040404	LIGHT-COMPOSITE WORK	4
22.	41715861	CONTROL PANEL ASM	1
23.	77044573	CONNECTOR 2-WAY	4
24.	77044552	TERMINAL-MALE 18-20GA	8
25.	70145799	RETAINER-ELEC HARNESS	32
26.	72061739	SCR-TEK #12-14X1 HWH #3PT	REF
28.	72061099	SCR-TEK #10-16X5/8 HWH	REF
29.	77040357	LIGHT-CLEAR RED	REF
30.	77041251	RELAY	REF
31.	77040186	TERMINAL-FSLPON 1/4 16-14GA	REF
32.	77040137	TERMINAL-FSLPON 1/4 12-10GA	REF
33.	77040053	TERMINAL-RING 1/4 12-10GA	REF
34.	77040230	TERMINAL-SPRSPD 12-10GA	REF



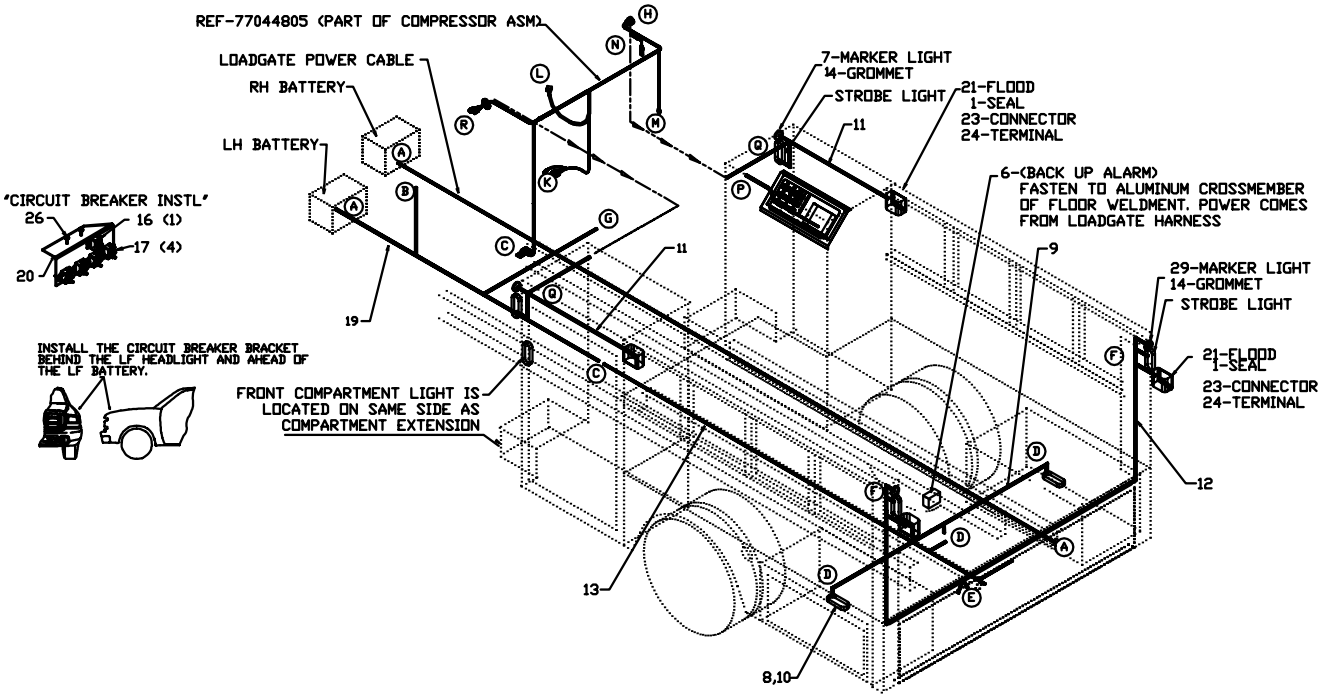
USED ON UNITS IN 1999 ONLY.

ELECTRICAL INSTALLATION (41715741-1) (JAN 2000 - 021073)

1.	70394069	SEAL	13
2.	77044550	TERMINAL-FEM 18-20GA	REF
3.	77044623	CONNECTOR 4-WAY	REF
4.	70145522	SPRING RETAINER	20
5.	72661491	CLIP	8
6.	77040020	BACKUP ALARM	1
7.	77040358	LIGHT-CLEAR AMBER	2
8.	77040384	LIGHT-COMPARTMENT 12V 2.1A	4
9.	77044703	WIRING HARNESS	1
10.	76394572	GROMMET	4
11.	77044804	HARNESS-FRONT COMPARTMENT	2
12.	77044912	HARNESS-REAR FLOOD/STROBE	1
13.	77044911	HARNESS-POWER/MAIN	1
14.	76393636	GROMMET	4
15.	77044689	CONNECTOR 1-WAY	1
16.	77040391	RELAY 12VDC 75A	REF
17.	77044672	CIRCUIT BREAKER 40A	REF
18.	70733297	IDLE CONTROL	REF
19.	77044962	HARNESS-CHASSIS/POWER	REF
20.	60250624	BRACKET-CIRC BRKR	REF
21.	77040404	LIGHT-COMPOSITE WORK	4
22.	41715861	CONTROL PANEL ASM	1

CONTINUED ON FOLLOWING PAGE

23.	77044573	CONNECTOR 2-WAY	4
24.	77044552	TERMINAL-MALE 18-20GA	8
25.	70145799	RETAINER-ELEC HARNESS	32
26.	72061739	SCR-TEK #12-14X1 HWH #3PT	REF
28.	72061099	SCR-TEK #10-16X5/8 HWH	REF
29.	77040357	LIGHT-CLEAR RED	2
30.	77041251	RELAY	REF
31.	77040186	TERMINAL-FSLPON 1/4 16-14GA	REF
32.	77040137	TERMINAL-FSLPON 1/4 12-10GA	REF
33.	77040053	TERMINAL-RING 1/4 12-10GA	REF
34.	77040230	TERMINAL-SPRSPD 12-10GA	REF

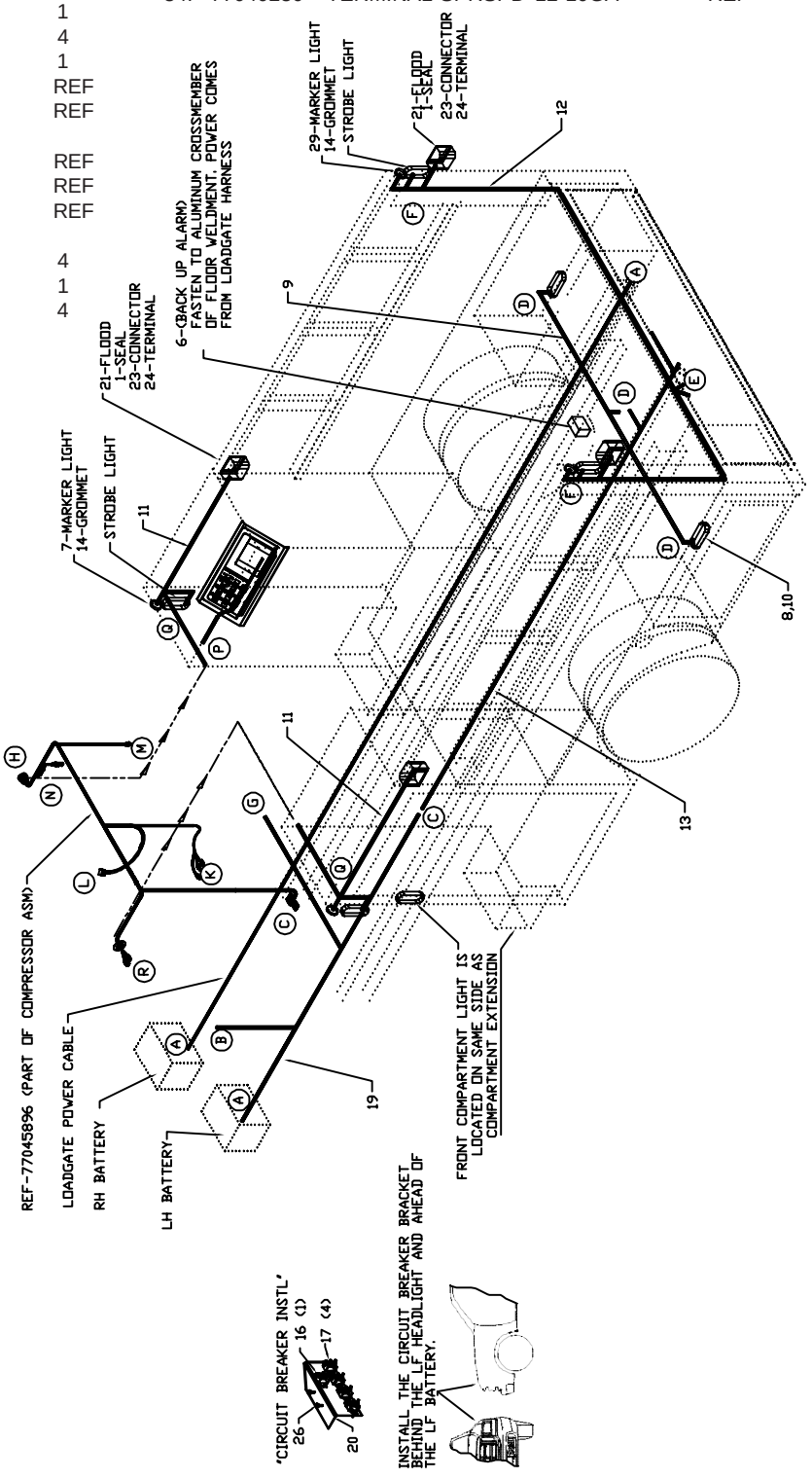


ELECTRICAL INSTALLATION (41715741-1)

1.	70394069	SEAL	13
2.	77044550	TERMINAL-FEM 18-20GA	REF
3.	77044623	CONNECTOR 4-WAY	REF
4.	70145522	SPRING RETAINER	20
5.	72661491	CLIP	8
6.	77040020	BACKUP ALARM	1
7.	77040358	LIGHT-CLEAR AMBER	2
8.	77040384	LIGHT-COMPARTMENT 12V 2.1A	4
9.	77044703	WIRING HARNESS	1
10.	76394572	GROMMET	4
11.	77045912	HARNESS-FRONT COMPARTMENT	2
12.	77045909	HARNESS-REAR FLOOD/STROBE	1
13.	77044911	HARNESS-POWER/MAIN	1
14.	76393636	GROMMET	4
15.	77044689	CONNECTOR 1-WAY	1
16.	77040391	RELAY 12VDC 75A	REF
17.	77041616	FUSE-MAXI 40 AMP (WAS 77044672)	REF
18.	70733297	IDLE CONTROL	REF
19.	77045884	HARNESS-CHASSIS/POWER	REF
20.	60251088	BRKT-RELAY & MAXI FUSE BLK (WAS 60250624)	REF
21.	77040404	LIGHT-COMPOSITE WORK	4
22.	41717767	CONTROL PANEL ASM	1
23.	77044573	CONNECTOR 2-WAY	4

CONTINUED ON FOLLOWING PAGE

24.	77044552	TERMINAL-MALE 18-20GA	8
25.	70145799	RETAINER-ELEC HARNESS	32
26.	72060835	SCR-SELF TAP 8-18X3.4 HHZ	REF
27.	72061739	SCR-TEK 12-14X1 HWH 3PT	REF
28.	72061099	SCR-TEK #10-16X5/8 HWH	REF
29.	77040357	LIGHT-CLEAR RED	2
30.	77041251	RELAY	REF
31.	77040186	TERMINAL-FSLPON 1/4 16-14GA	REF
32.	77040137	TERMINAL-FSLPON 1/4 12-10GA	REF
33.	77040053	TERMINAL-RING 1/4 12-10GA	REF
34.	77040230	TERMINAL-SPRSPD 12-10GA	REF



SERIAL NUMBERS PRED021074 TO PRESENT.

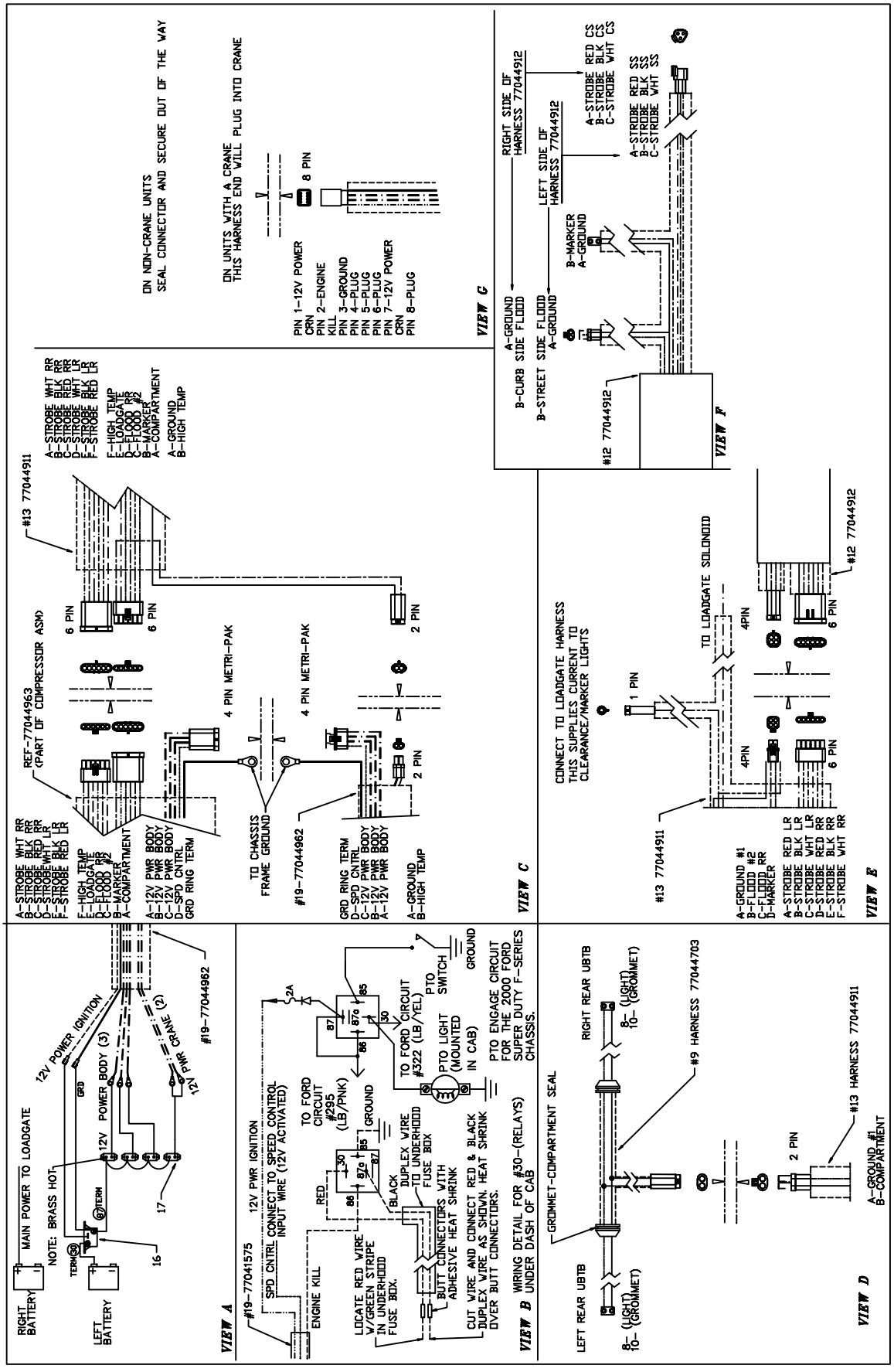
ELECTRICAL INSTALLATION (41715741-2) (1999 ONLY)

CONTINUED ON FOLLOWING PAGE

SERIAL NUMBERS PRED991001 THROUGH 1/2000.

ELECTRICAL INSTALLATION (41715741-2)
(1/2000 THRU PRED021073)

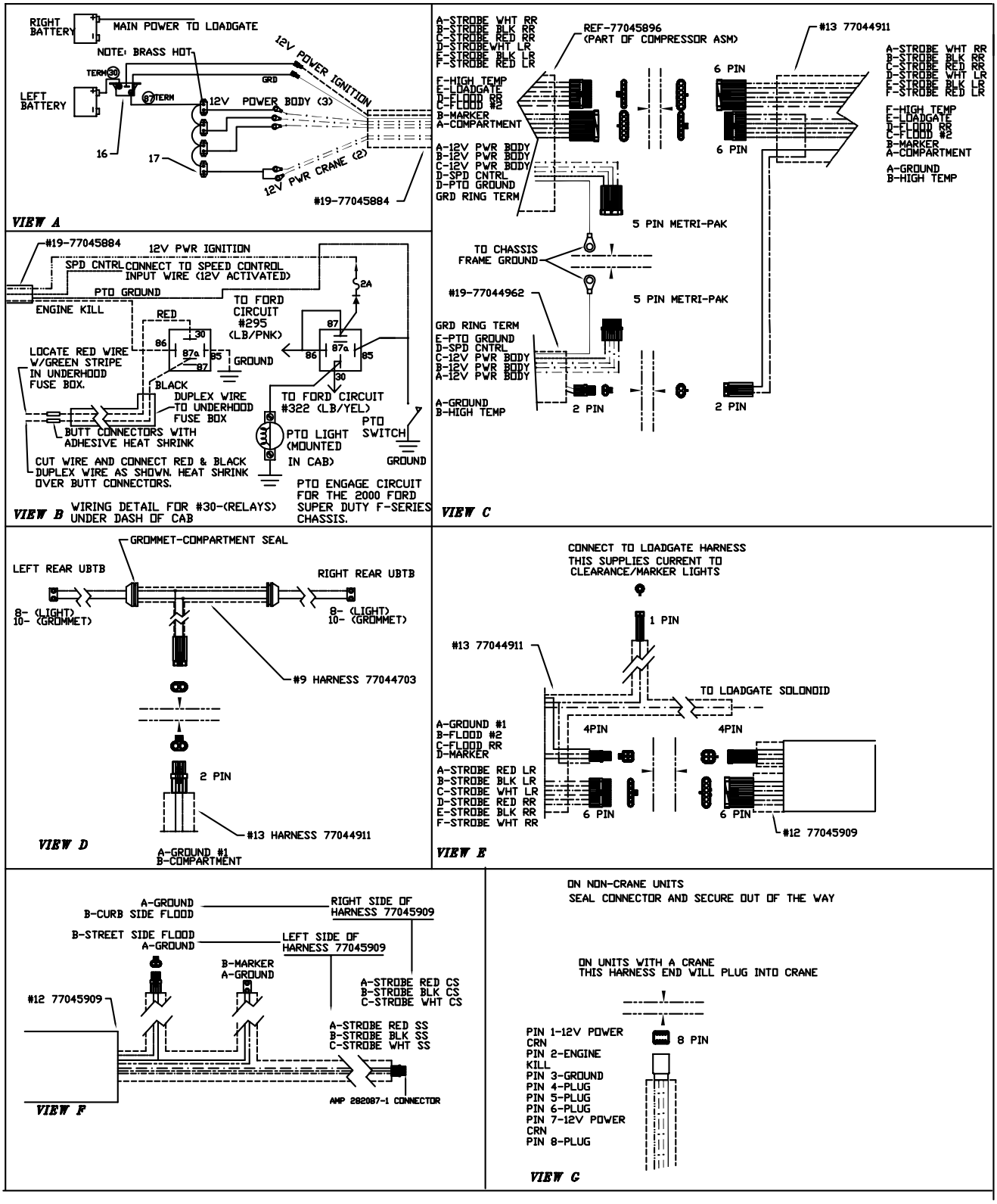
CONTINUED ON FOLLOWING PAGE



UNITS FROM JAN. 2000 THROUGH SERIAL NUMBER PRED021073

ELECTRICAL INSTALLATION (41715741-2) (021074 - 7/6/03)

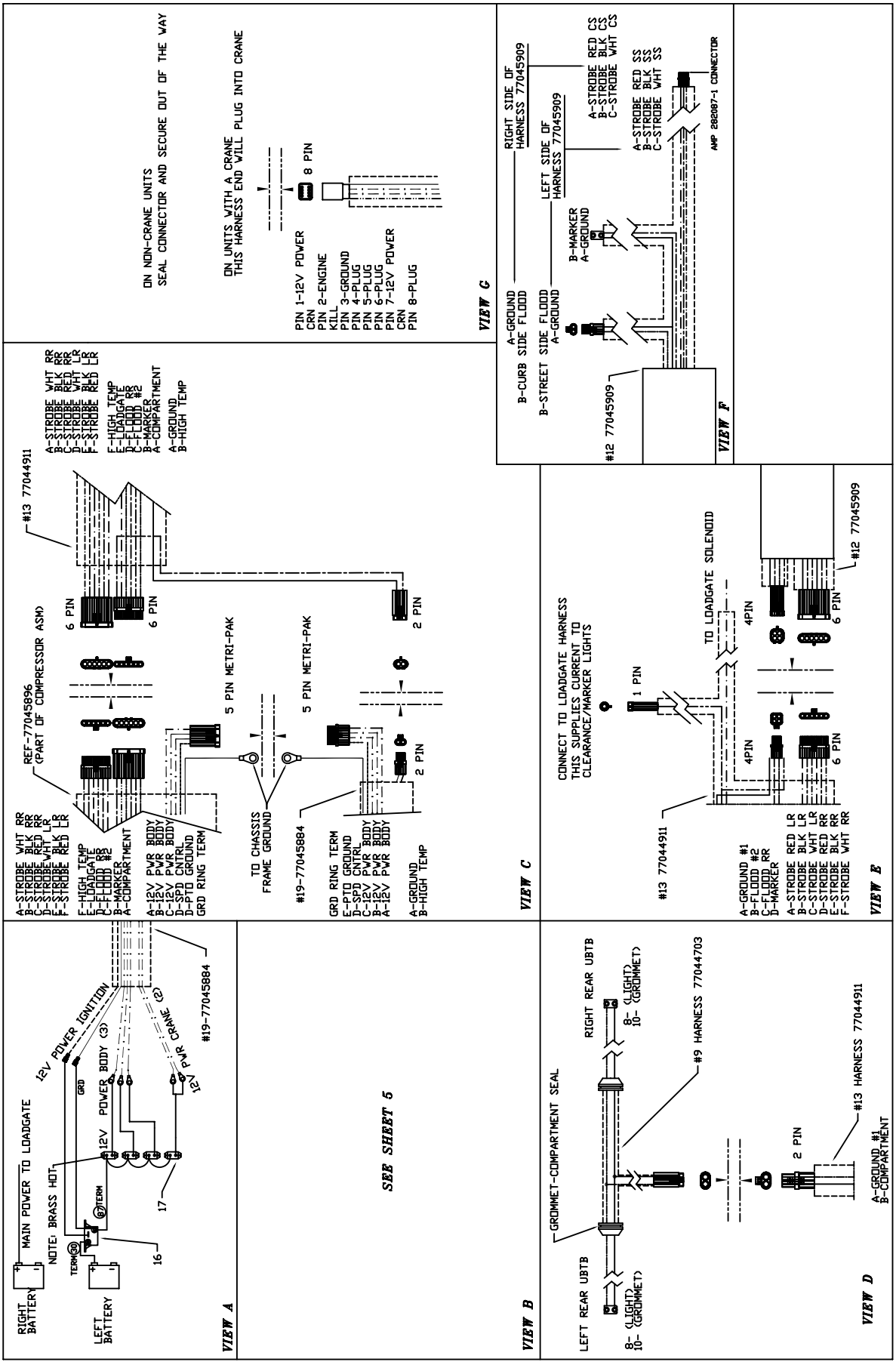
CONTINUED ON FOLLOWING PAGE



Note: View B - Wiring detail for Ford Super-Duty Chassis applies to Ford Chassis through 2001 model year. Ford 2002 Super Duty Chassis have revised wiring colors. See next page.

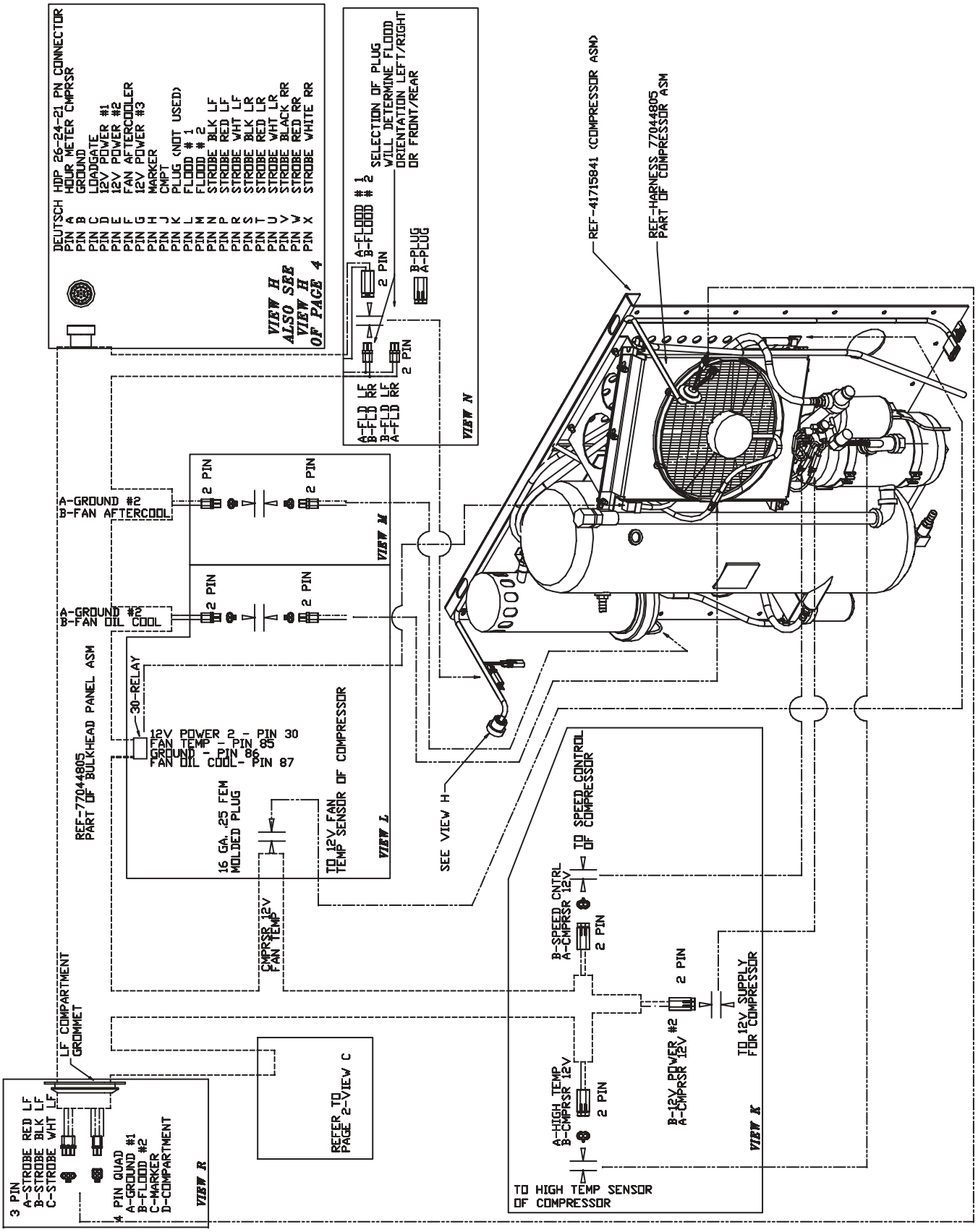
SERIAL NUMBERS PRED021074 TO JULY 6, 2003.

ELECTRICAL INSTALLATION (41715741-2)
(EFFECTIVE 7/7/03)



EFFECTIVE JULY 7, 2003.

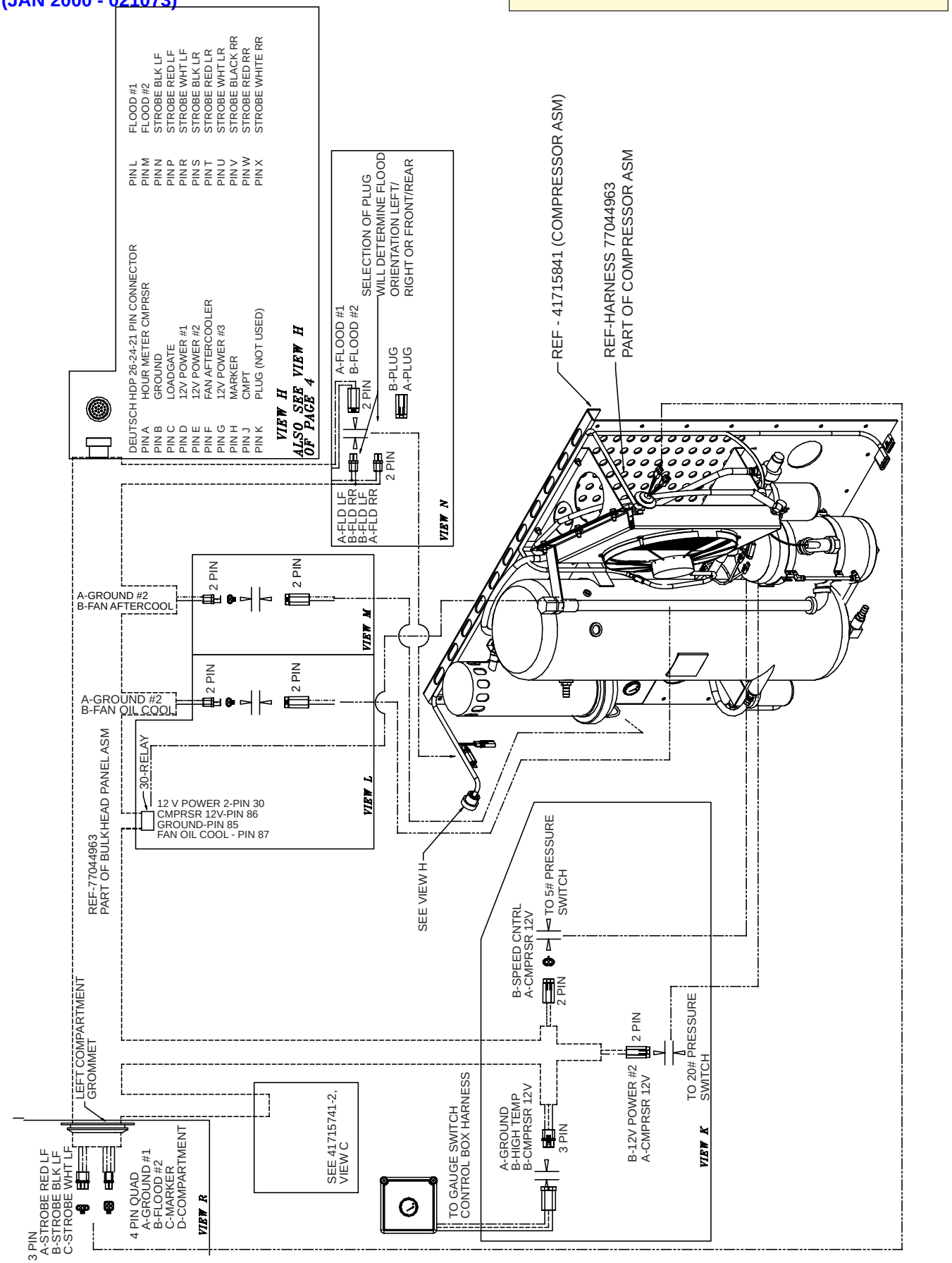
ELECTRICAL INSTALLATION (41715741-3) (1999 ONLY)



UNITS PRODUCED IN 1999 ONLY

ELECTRICAL INSTALLATION (41715741-3) (JAN 2000 - 021073)

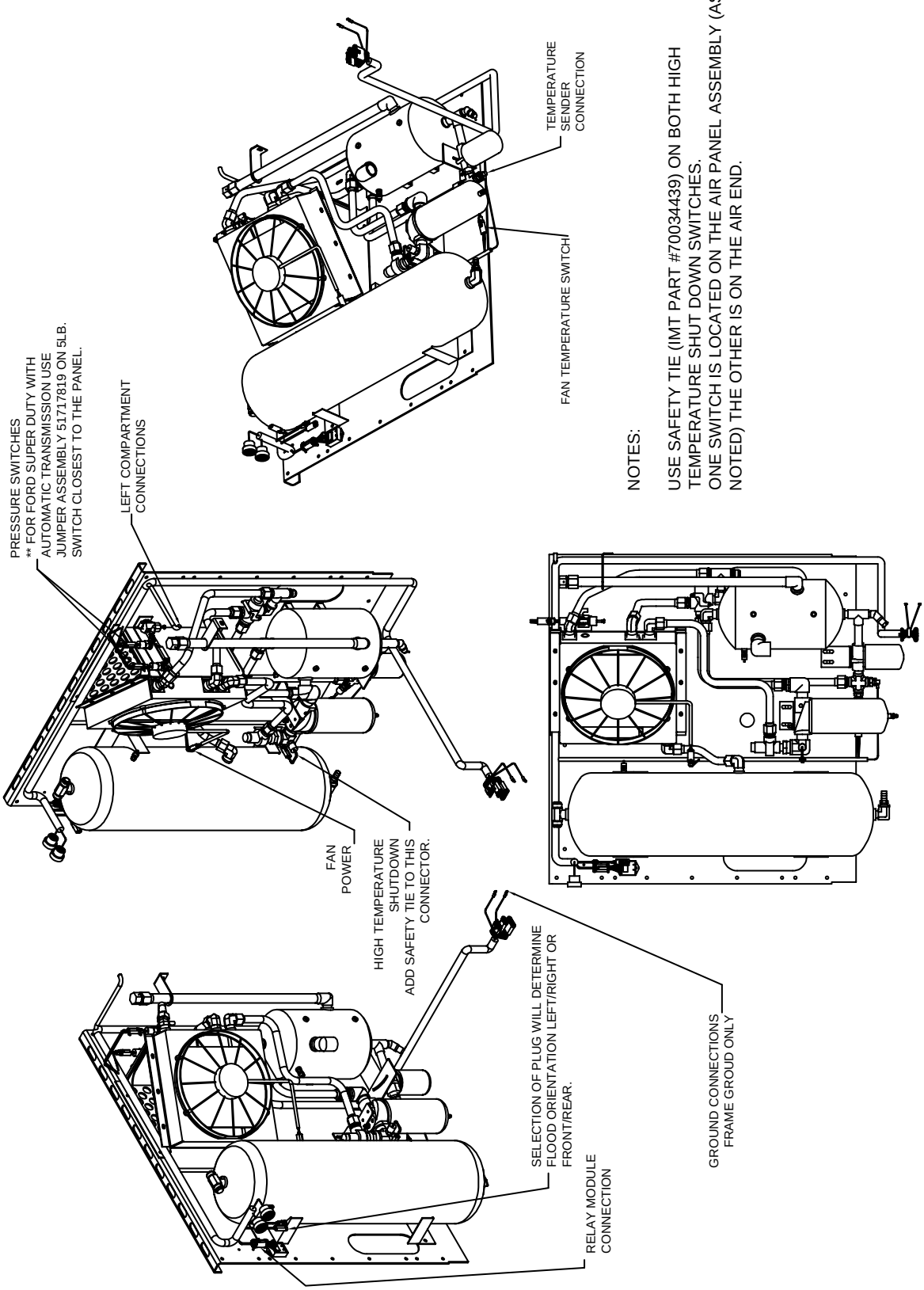
CONTINUED ON FOLLOWING PAGE



UNITS PRODUCED JAN 2000 THROUGH PRED021073

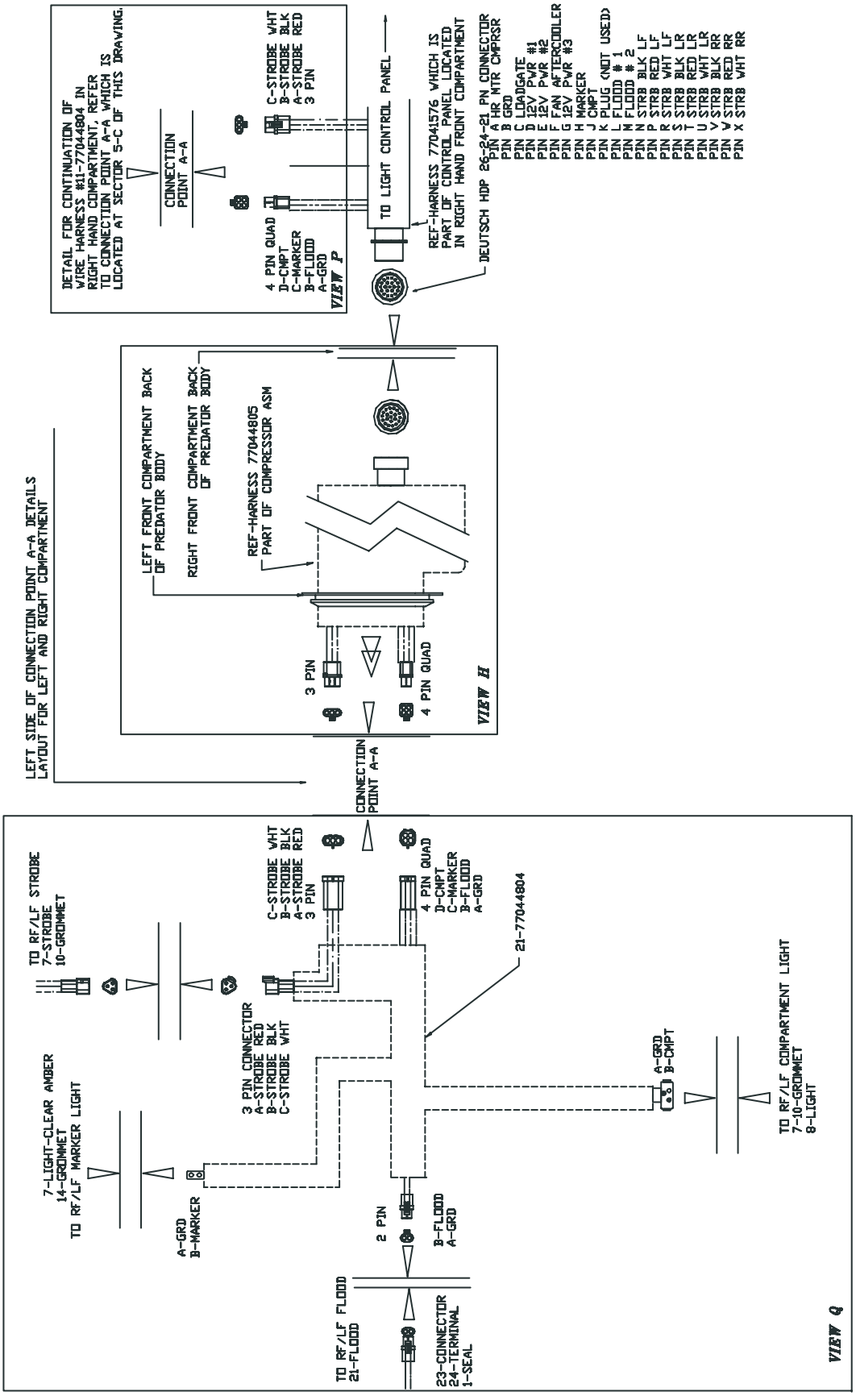
ELECTRICAL INSTALLATION (41715741-3) (021074 - PRESENT)

CONTINUED ON FOLLOWING PAGE



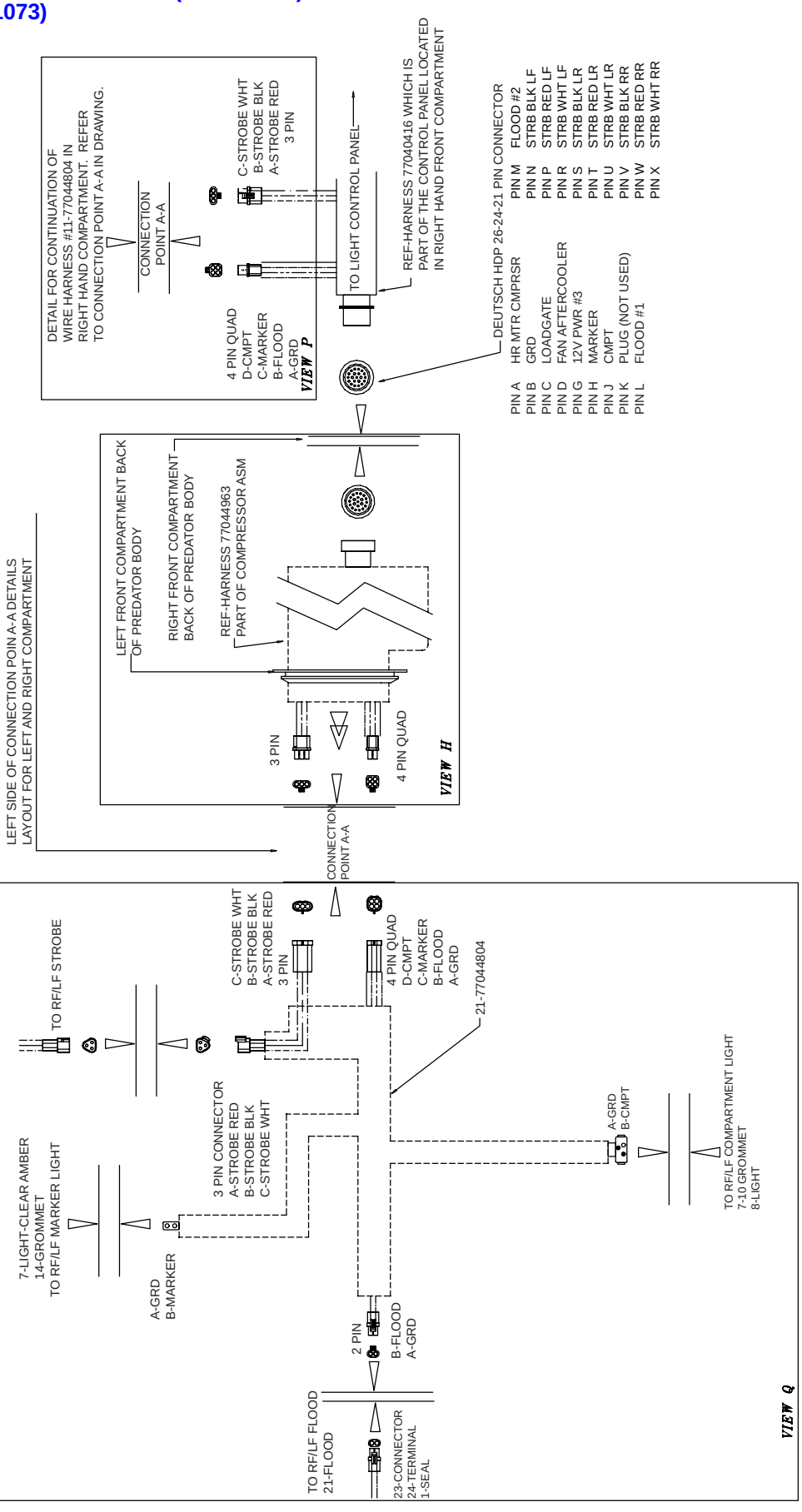
SERIAL NUMBERS PRED021074 TO PRESENT.

ELECTRICAL INSTALLATION (41715741-4) (1999 ONLY)



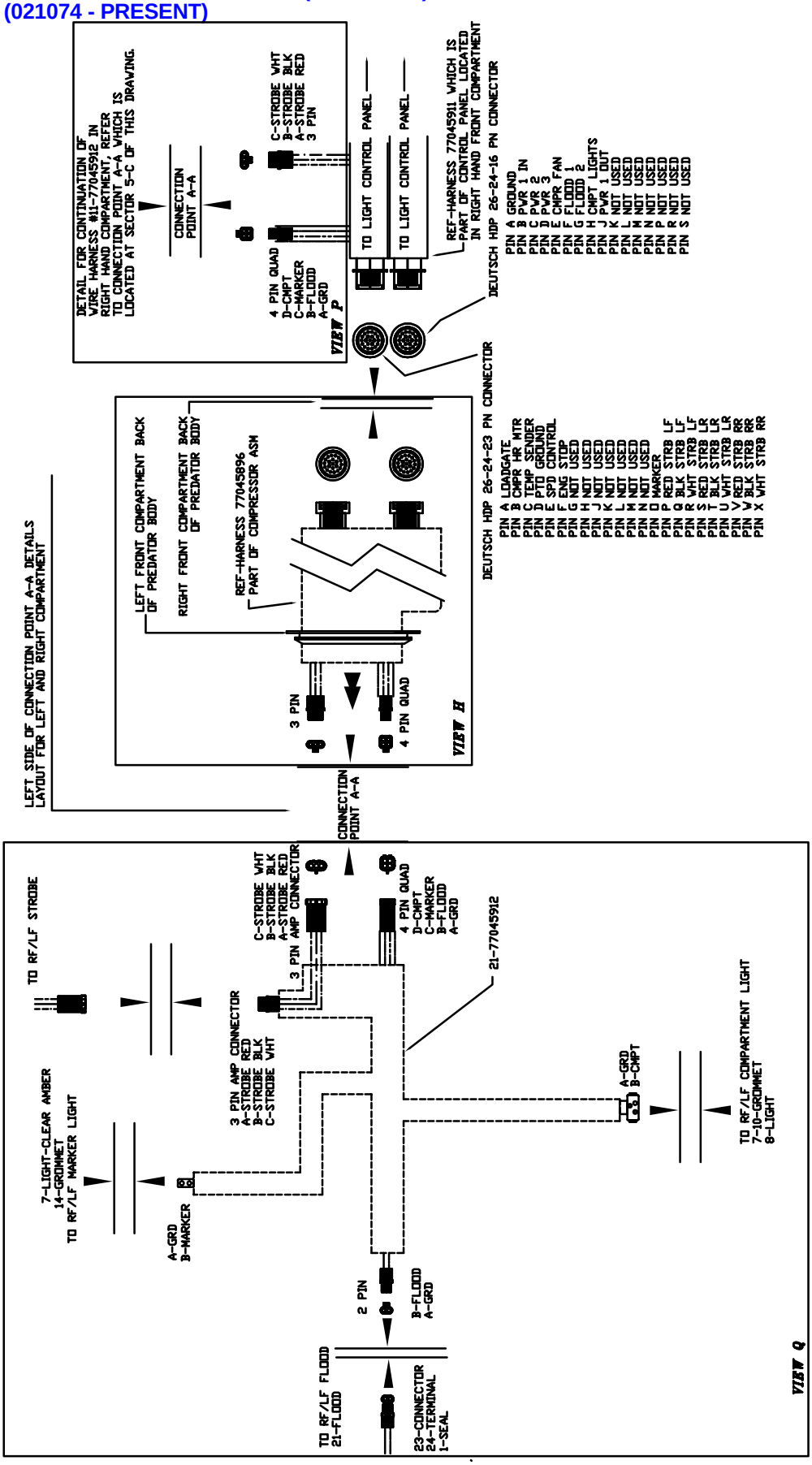
USED ON UNITS IN 1999 ONLY.

ELECTRICAL INSTALLATION (41715741-4) (991001 - 021073)



SERIAL NUMBERS PRED991001 THROUGH PRED021073

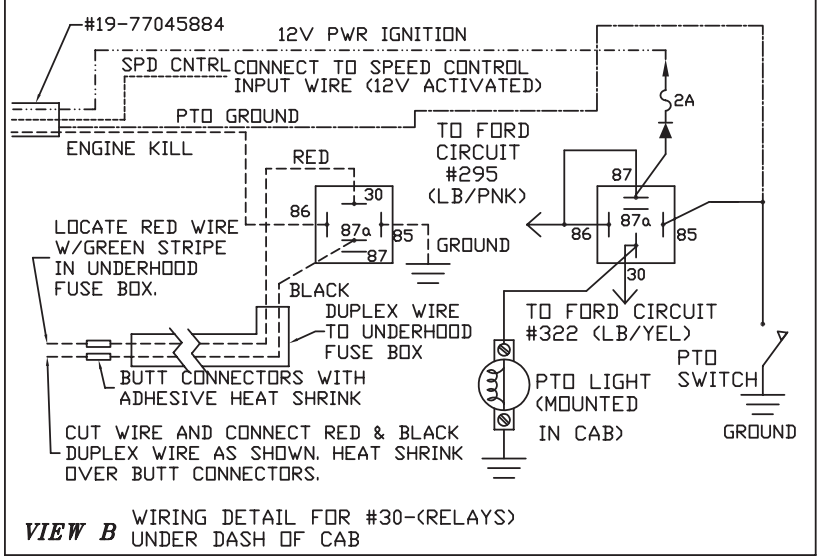
ELECTRICAL INSTALLATION (41715741-4)
(021074 - PRESENT)



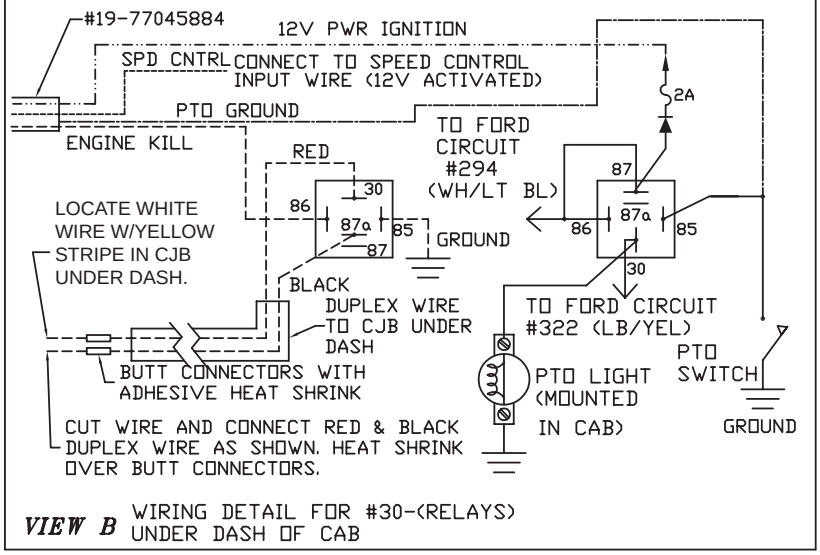
SERIAL NUMBERS PRED021074 TO PRESENT.

ELECTRICAL INSTALLATION (41715741-5) (EFFECTIVE 7/7/03)

PTO ENGAGE CIRCUIT FOR 2000 FORD SUPER DUTY F-SERIES CHASSIS



PTO ENGAGE CIRCUIT FOR 2002 FORD SUPER DUTY F-SERIES CHASSIS



PTO ENGAGE CIRCUIT FOR 2003 FORD SUPER DUTY F-SERIES CHASSIS

PTO, ENGINE KILL, AND ENGINE SPEED DIAGRAMS FOR 2003 MODEL YEAR CAN BE FOUND IN THE EFM MANUAL, 99903556 (FOR AUTOMATIC), AND 99903454 (FOR MANUAL).

VIEW B

NOTES:

1. FORD SUPER DUTY WIRING COLOR FOR ENGINE KILL (CKT 16) CHANGED FROM RED W/ LT GREEN TO WHITE W/ YELLOW FOR 2002 MODEL YEAR.

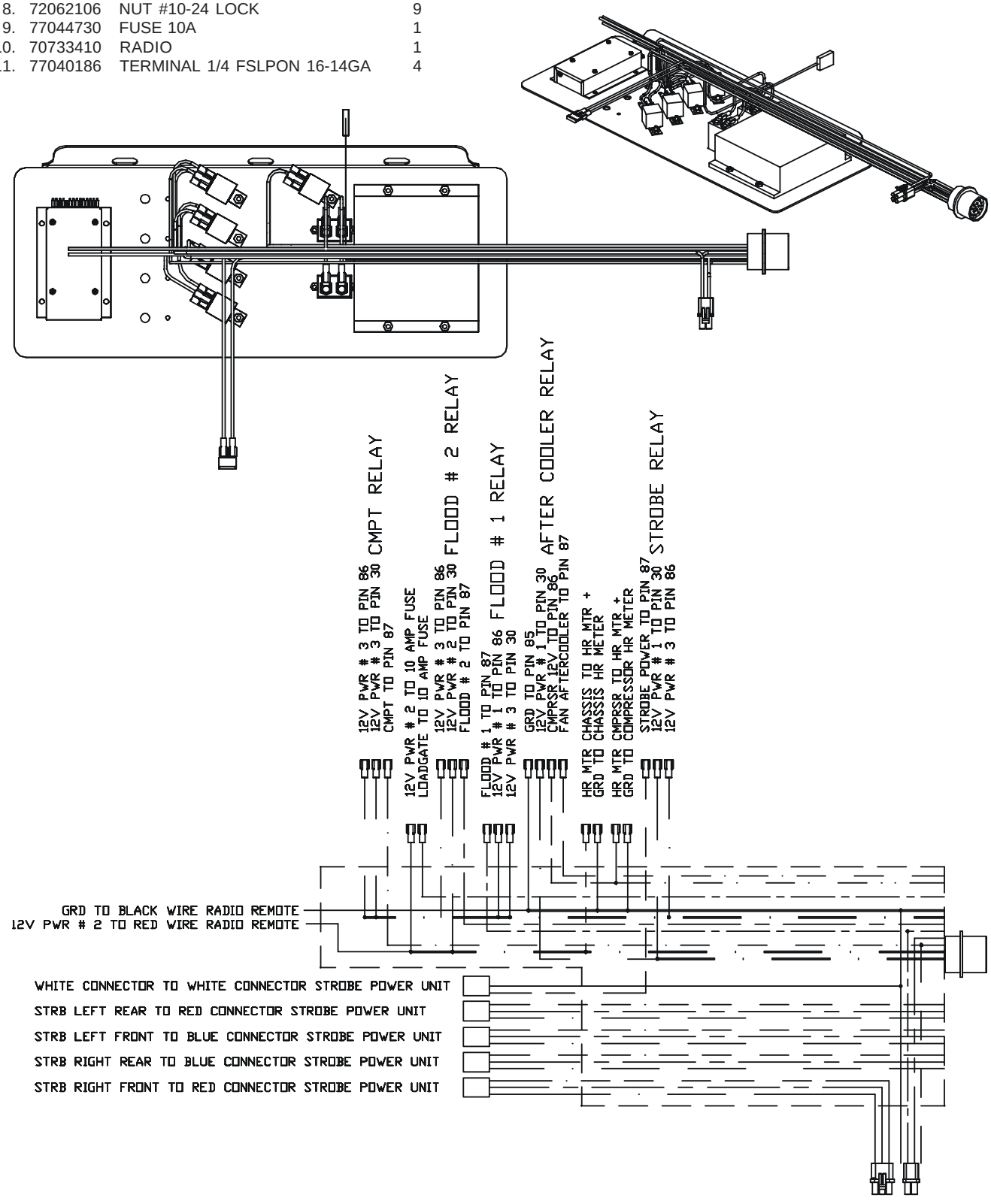
2. FORD SUPER DUTY WIRING COLOR AND CIRCUIT NUMBER FOR 12V IGNITION POWER CHANGED FROM CKT 295 (LIGHT BLUE W/ PINK) TO CKT 294 (WHITE W/ LIGHT BLUE) FOR 2002 MODEL YEAR.

3. INSTALLATION OF PTO WIRING ON FORD SUPER DUTY FOR 2003 MODEL YEAR WITH AUTOMATIC TRANSMISSION CAN BE FOUND ON 99903556. THE FORD APCM IS USED ON CHASSIS WITH AUTOMATIC TRANSMISSIONS TO SIMULTANEOUSLY ENGAGE PTO AND ELEVATE ENGINE RPM.

EFFECTIVE 7/7/03

ELECTRICAL PANEL ASM (41715823) (1999 ONLY)

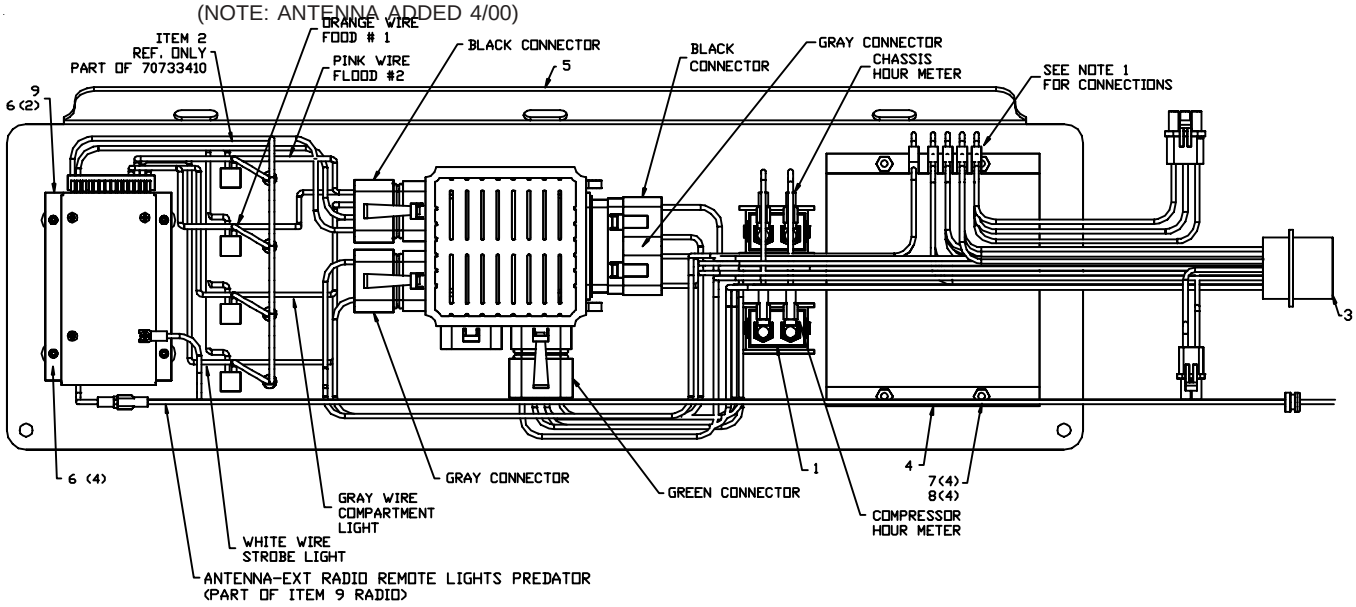
1.	70073155	HOURMETER	2
2.	77041251	RELAY	5
3.	77041576	HARNESS	1
4.	77041577	STROBE LIGHT SYSTEM	1
5.	60250720	ELEC CTRL PANEL	1
6.	77044746	FASTENER	4
7.	72060634	MACH SCR #10-24X1/2 RDHD	9
8.	72062106	NUT #10-24 LOCK	9
9.	77044730	FUSE 10A	1
10.	70733410	RADIO	1
11.	77040186	TERMINAL 1/4 FSLPON 16-14GA	4



EFFECTIVE THROUGH 1999.

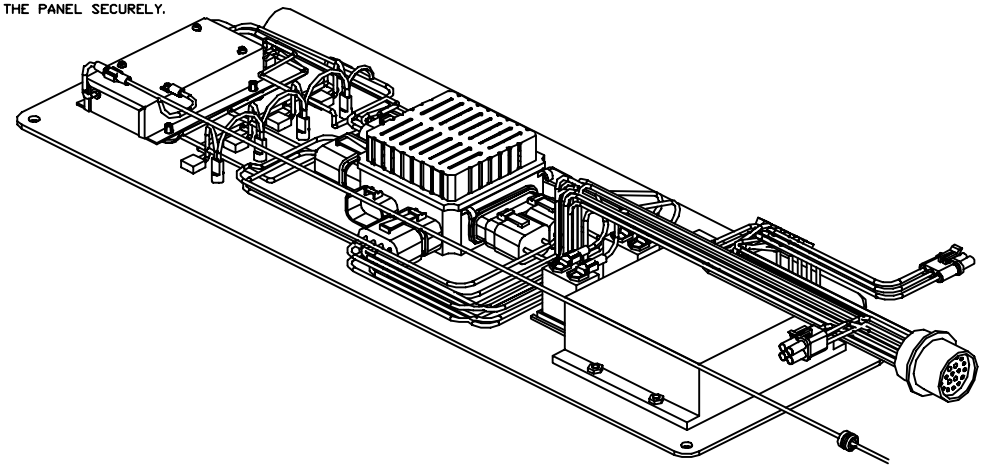
ELECTRICAL PANEL ASM (41715861) (EFF:1/10/00 - PRED021073)

1.	70733496	HOURMETER	2
2.	77040415	HARNESS-RADIO RMT	REF
3.	77041416	HARNESS-CTRL PNL	1
4.	77041577	STROBE LIGHT SYSTEM	1
5.	60250740	ELEC CTRL PANEL	1
6.	72661535	RIVET (EFF. 1/01)	4
	77044746	FASTENER (THRU 1/01)	4
7.	72060634	MACH SCR #10-24X1/2 RDHD	4
8.	72062106	NUT #10-24 LOCK	4
9.	70733410	RADIO	1
10.	72060628	MACH SCR #10-32X1-1/2 RDHD	4
11.	72062182	NUT #10-32 HWH	4
12.	77040409	MODULE-VEH ELEC CTRL	1
13.	70733441	ANTENNA-EXT	REF
		(NOTE: ANTENNA ADDED 4/00)	



NOTES: 1. CONNECT THE RIGHT FRONT STROBE TO ONE OF THE RED CONNECTORS.
CONNECT THE LEFT FRONT STROBE TO ONE OF THE BLUE CONNECTORS.
CONNECT THE RIGHT REAR STROBE TO ONE OF THE BLUE CONNECTORS.
CONNECT THE LEFT REAR STROBE TO ONE OF THE RED CONNECTORS.
CONNECT THE POWER LEAD TO THE WHITE CONNECTOR.
THERE WILL BE TWO ADDITIONAL LEADS ON THE STROBE UNIT THAT ARE NOT USED.

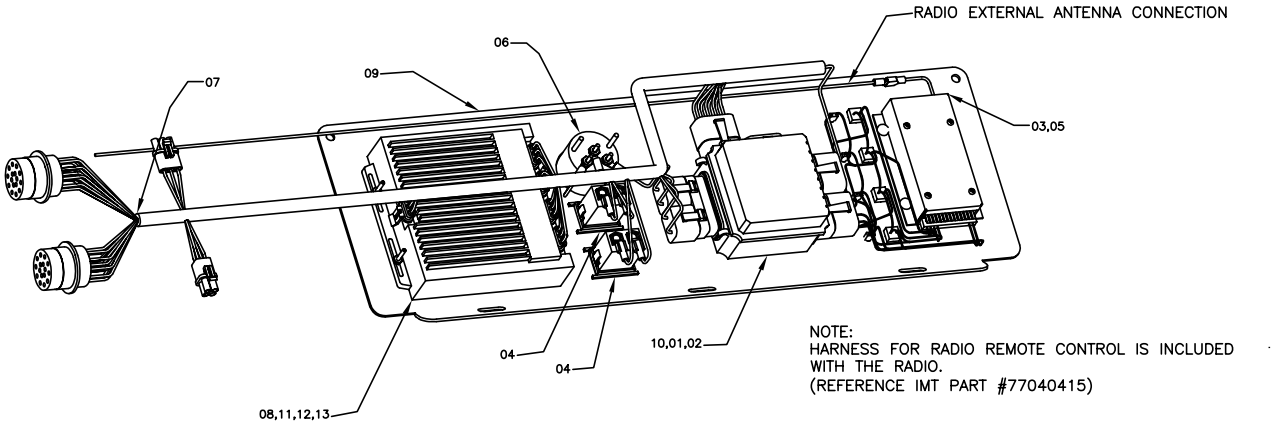
2. TIE RADIO REMOTE TRANSMITTER TO THE PANEL SECURELY.



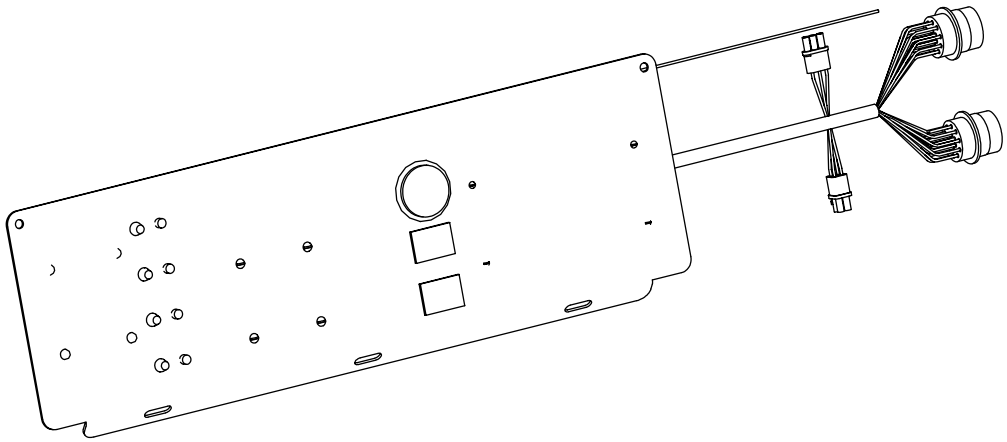
EFFECTIVE FROM 1/1/00 THROUGH SERIAL NUMBER PRED021073.

SWITCH PANEL ASSEMBLY (41717767) (PRED021074 TO PRESENT)

1.	72062182	NUT #10-32 HEX W/STAR WASH	4
2.	72060628	SCR-MACH 10-32 X 1.50 RDH	4
3.	70733410	RADIO-WIRELESS LT CNTRL	1
4.	70733496	METER-DATCON PUSH LOCK	2
5.	72661535	RIVET-SCR PLASTIC ISOLATER	4
6.	70048225	TEMP GAUGE	1
7.	77045911	HARNESS-CONTROL PANEL	1
8.	77040438	STROBE LIGHT	1
9.	60124627	PANEL-ELEC CONTROL	1
10.	77041653	MODULE-BUSSMANN VEC	1
11.	72601704	SCR-MACH 6-32X3/4 RDH	4
12.	72601726	NUT #6-32 HEX NYLOC	4
13.	72601705	WASHER 6W FLAT	4

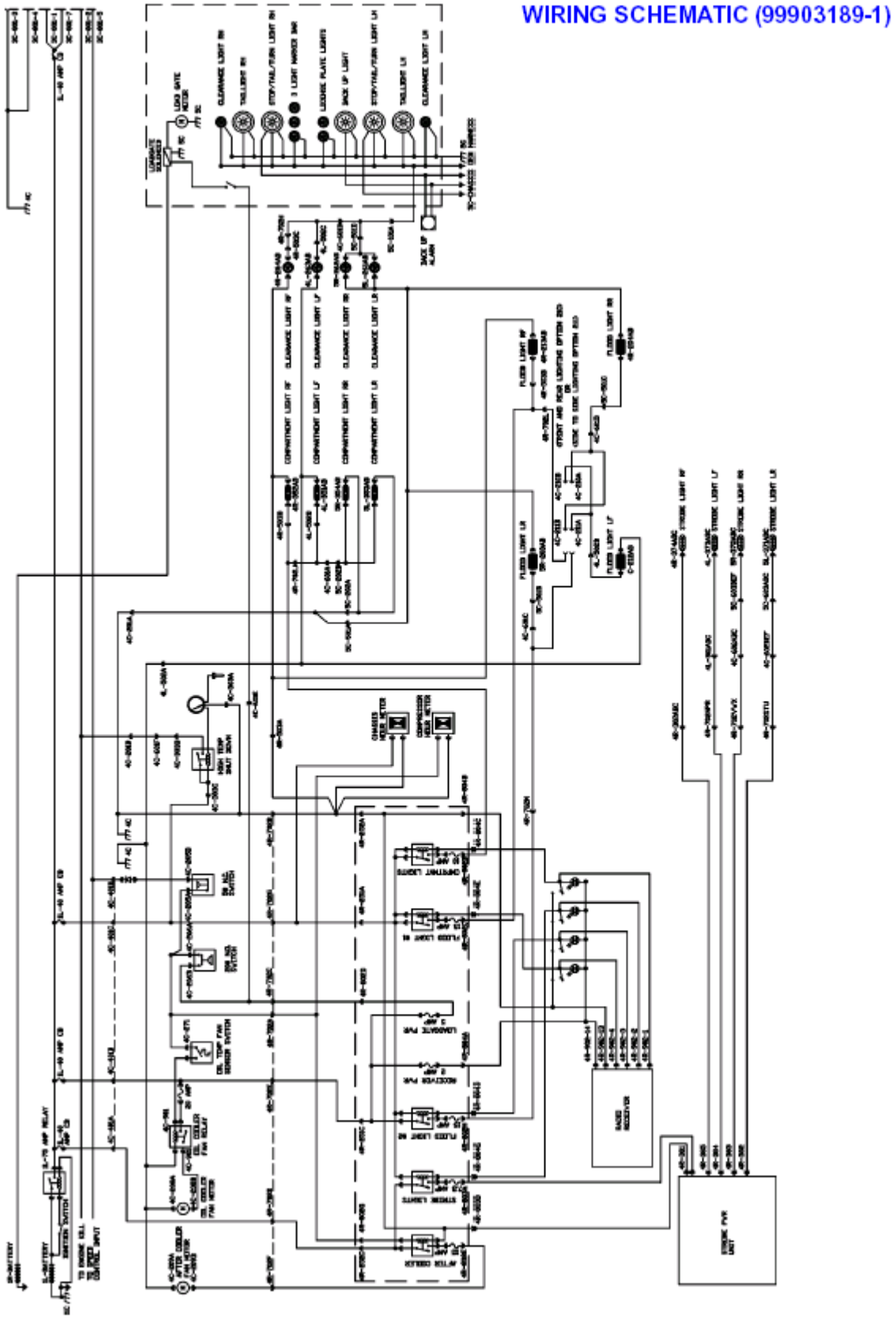


NOTE:
THREE CONNECTIONS ARE MADE TO THE TEMPERATURE GAGE AS FOLLOWS:
–WIRE LABELED TEMP SENDER ATTACHES TO THE "S" TERMINAL ON THE GAGE.
–WIRE LABELED PWR 3 ATTACHES TO THE "I" TERMINAL ON THE GAGE.
–WIRE LABELED GROUND ATTACHES TO THE "G" TERMINAL ON THE GAGE.



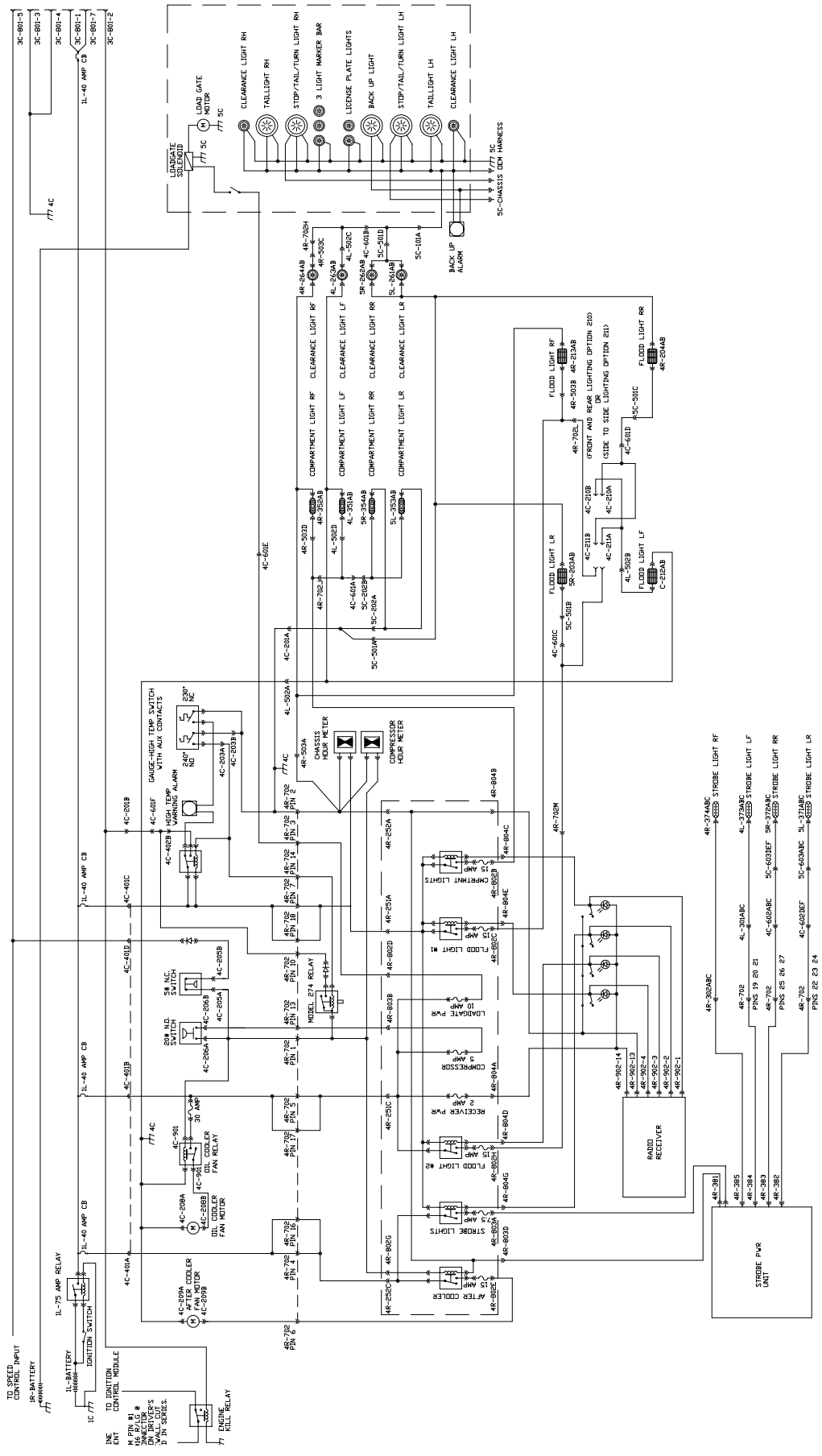
SERIAL NUMBERS PRED021074 TO PRESENT.

WIRING SCHEMATIC (99903189-1) (1999 - 1/01)



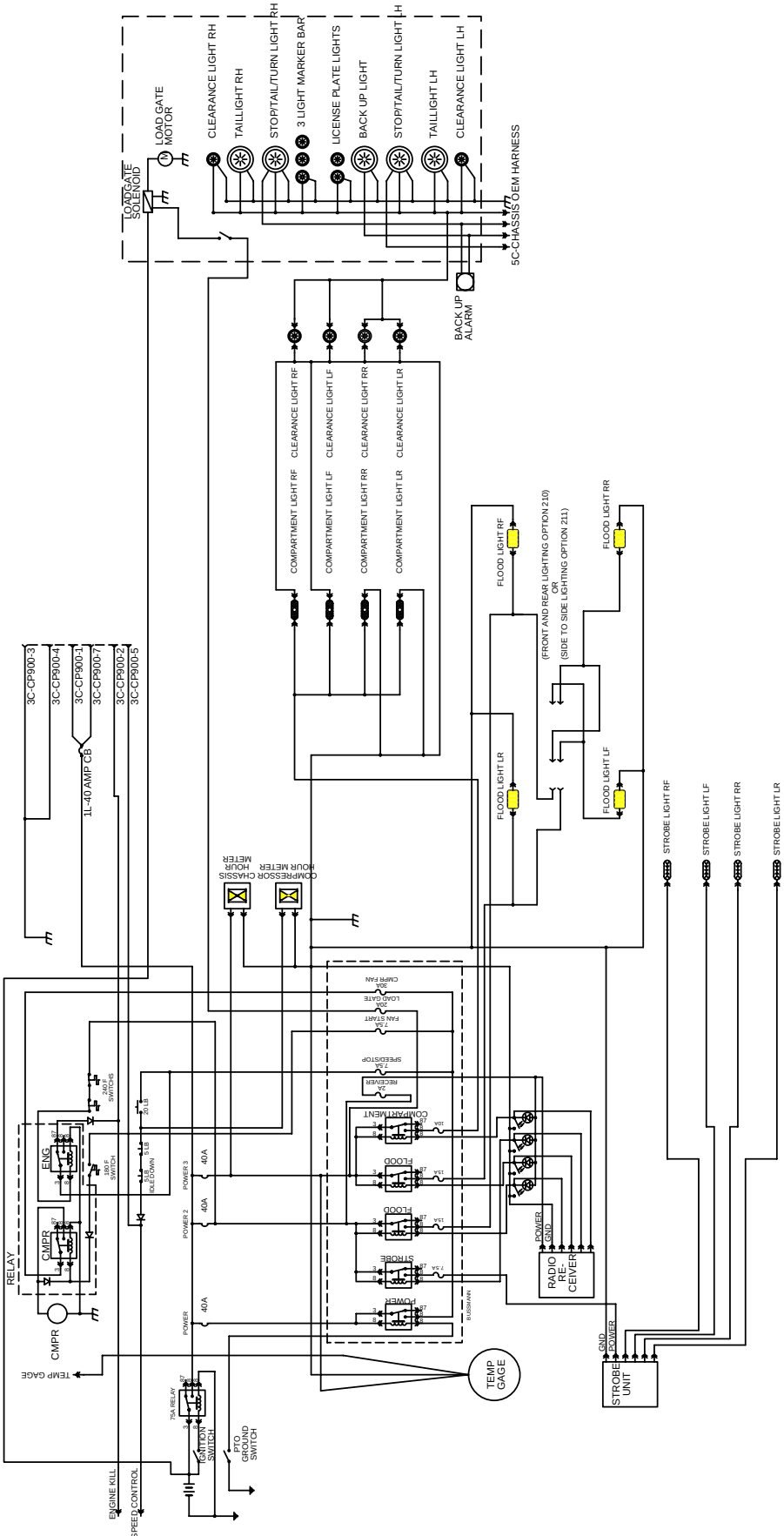
USED ON MODELS BETWEEN 1999 AND JAN. 2001.

WIRING SCHEMATIC (99903189-1) (JAN/01 TO PRED021073)



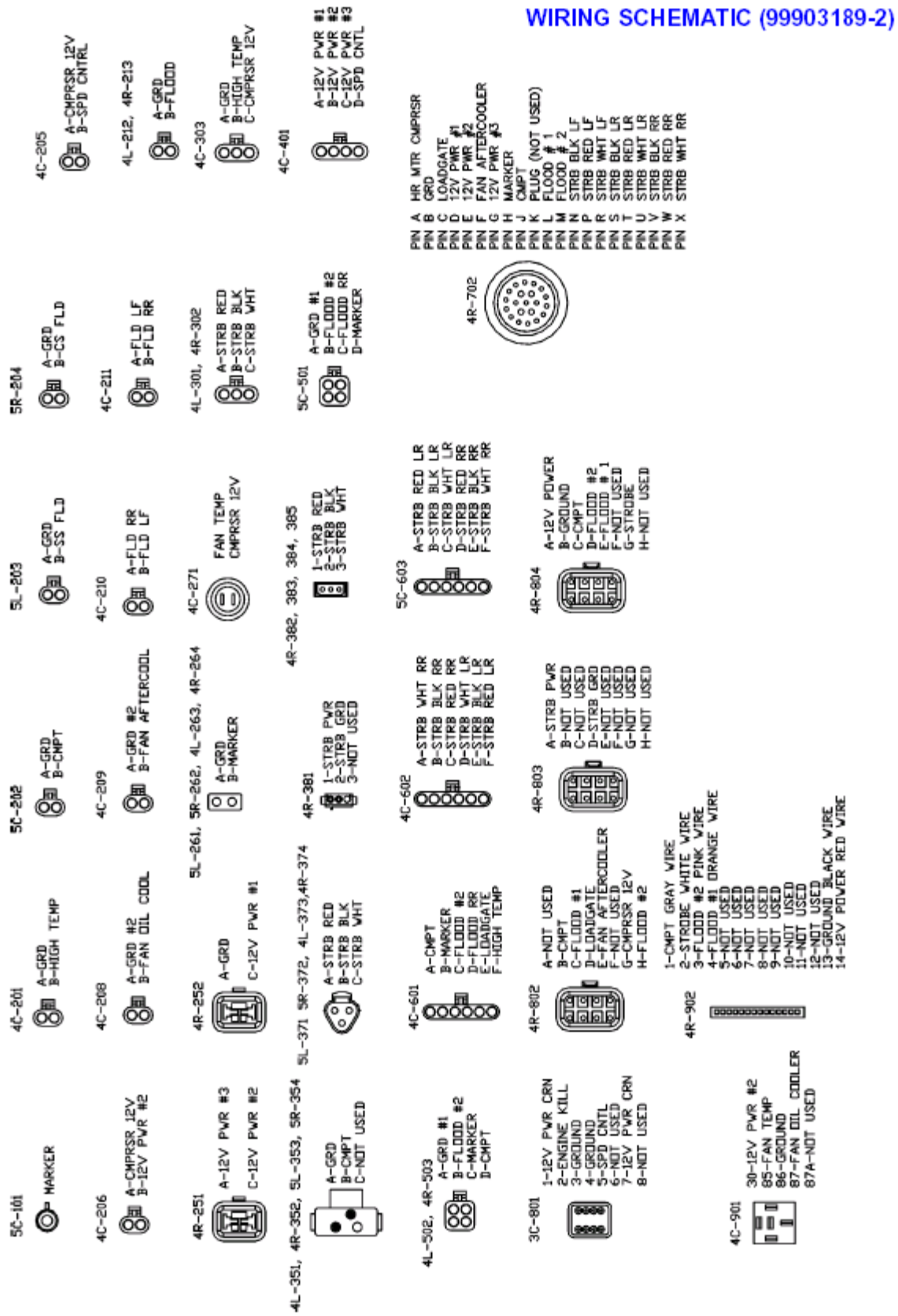
UNITS FROM JAN/01 THROUGH SERIAL NUMBER PRED021073.

WIRING SCHEMATIC (99903446) (021074 TO PRESENT)



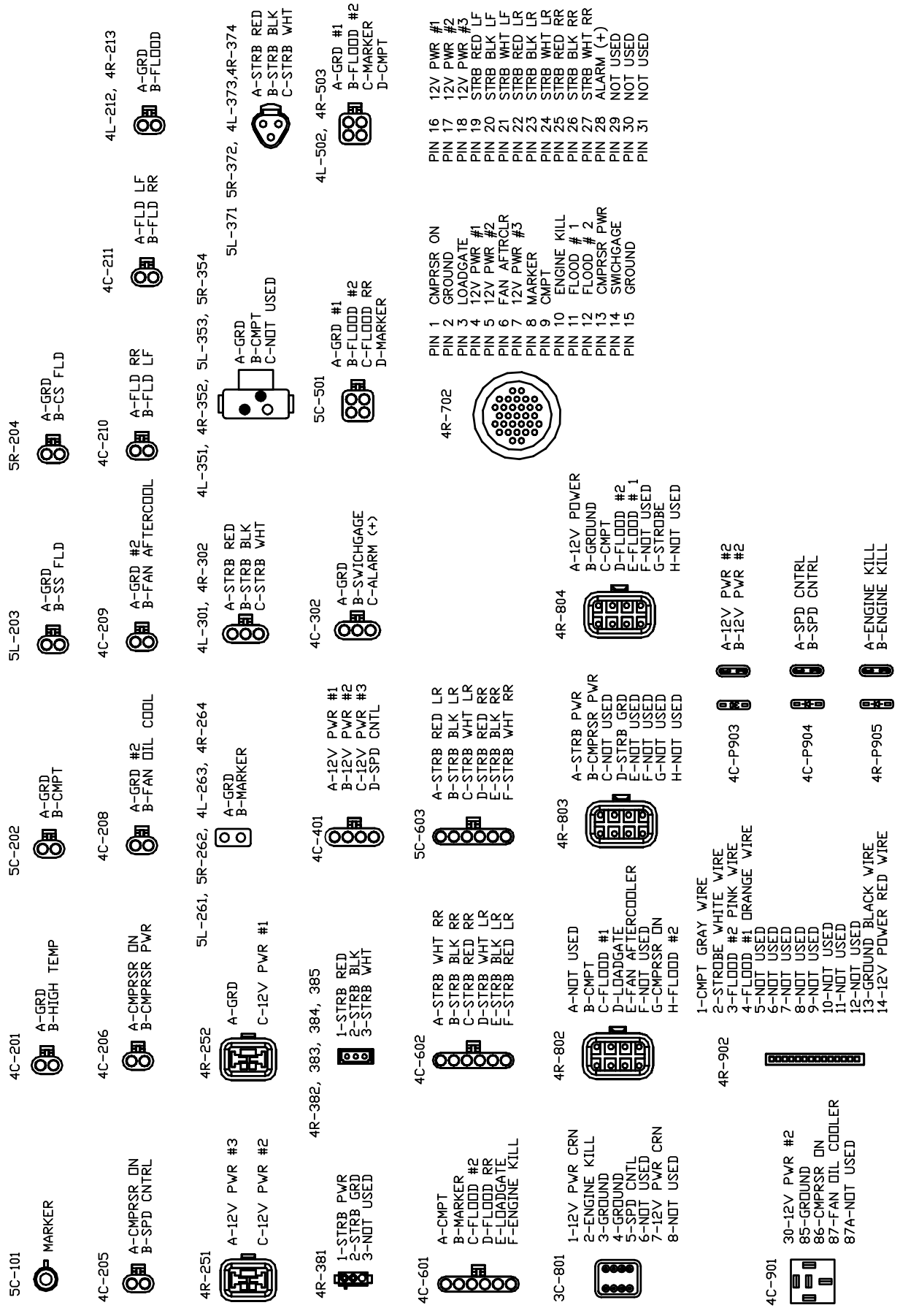
SERIAL NUMBERS PRED021074 TO PRESENT.

WIRING SCHEMATIC (99903189-2) (1999 THRU 1/01)



USED ON UNITS BETWEEN 1999 AND 1/01

WIRING SCHEMATIC (99903189-2) (1/01 - PRED 021073)



UNITS FROM 1/01 THROUGH SERIAL NUMBER PRED021073.

WIRELESS LIGHT CONTROL SYSTEM (70733410-1)

ADDITIONAL TRANSMITTERS

The transmitter supplied with the Wireles Light control System is coded for security. The transmitter code is printed on a label located on the back of the receiver case. The first number is the serial number and the second is your 4-digit transmitter code. A transmitter code of '9000' indicates that your system can 'learn' up to three different transmitter codes. If ou order an additional transmitter, give Technical Support the code '9000' and you will receive the transmitter along with instructions for teaching the new transmitter to your remote system. These instructions are also printed near the end of this section.

INSTALLATION

The receiver is already mounted on the interior of the vehicle so that it is not exposed to moisture. It is secured using a double sided adhesive tape, such as Velcro. The black wire coming out of the rear of the receiver is the antenna and is not connected to anything. Stretching this wire out away from other electrical wires will enhance the unit's reception.

The harness is connected as listed below. The unit needs only the red and black wires connected in order to operate. The other wires will be hooked up according to IMT application. The Wireless Light Control System is connected to a 12-volt battery for power, however never slely to a battery charger.

RED	12-volt batter source fused at 2 amps
BLACK	Chassis ground
ORANGE	Relay #1 toggle (Flood 1)
PINK	Relay #2 toggle (Flood 2)
WHITE	Relay #3 toggle (Strobe)
GRAY	Relay #4 toggle (Compartment)

The white, gray, orange, and pink are negative switched outputs designed to only turn on external relays.

RADIO FREQUENCY INTERFERENCE STATEMENT

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15, Subpart B of the FCC Rules. This equipment generates, use, and can radiate radio frequency energy. It is installed in accordance with manufacturer instructions.

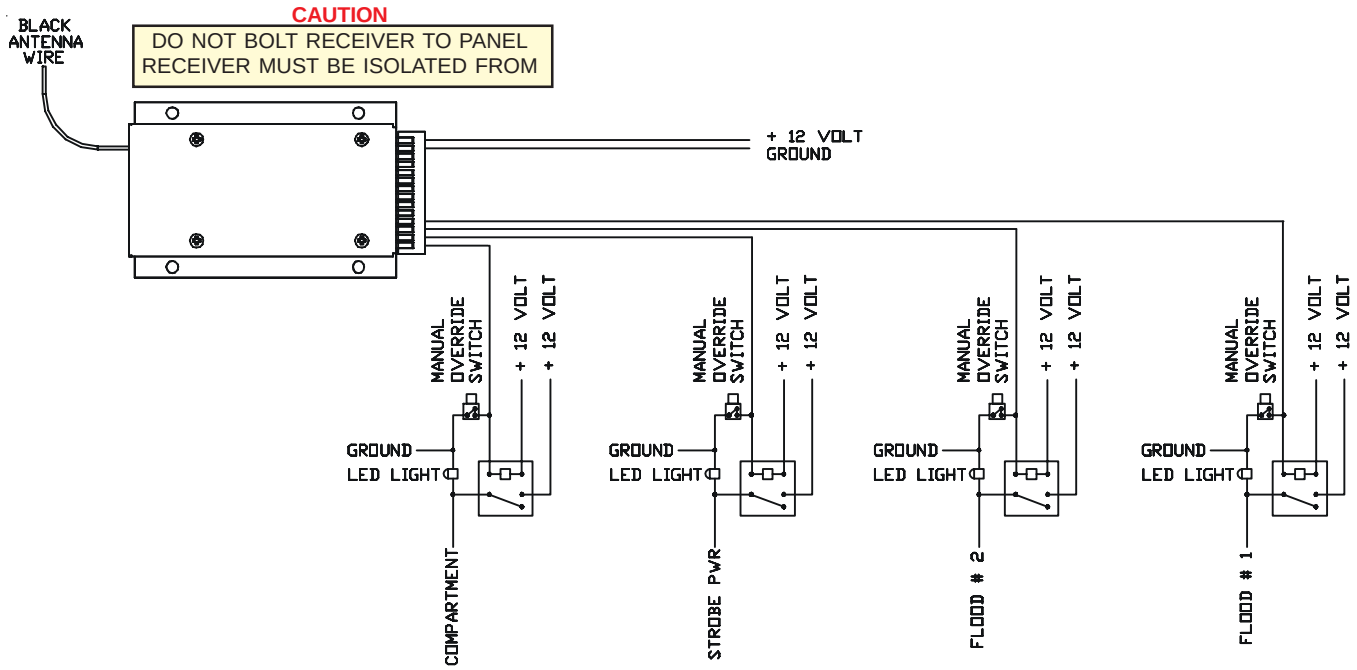
The limits are designed to provide reasonable protection against such interference in a residential situation. However, there is not guarantee that interference will not occur in a particular installation. If this equipment does cause insterference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the affected radio or television.
- Increase the separation between the equipment and the affected receiver.
- Connect the equipment and the affected receiver to separate power circuits.
- Consult the dealer or an experienced radio/TV technician for help.

MODIFICATIONS

Changes or modifications not expressly approved by Iowa Mold Tooling Co., Inc. could void the user's authority to operate the equipment.

REMOTE SYSTEM WIRING DIAGRAM



SERIAL NUMBERS PRED991001 TO PRESENT.

WIRELESS LIGHT CONTROL SYSTEM (70733410-2)

OPERATION

The key chain transmitter has four buttons labeled 'I', 'II', 'III', and 'IV' respectively. Button 'I' controls the relay connected to the orange wire. The first time it is pressed it will turn the relay on. The next time it is pressed it will turn the relay off. Button 'II' controls the relay connected to the pink wire, button 'III' controls the relay connected to the white wire, and button 'IV' controls the relay connected to the gray wire. Besure to press and hold the buttons at least one second when turning on or off the function for proper operation.

TROUBLE SHOOTING GUIDE

SYMPTON	POSSIBLE PROBLEM	SOLUTION
System will not operate any functions	Receiver is not getting power	Check 12 volt connection
		Check ground connection
		Check fuses
Lights flash or appear dim	Weak or poor 12 volt connection	Check 12 volt connection
	Transmitter signal is being disrupted	Move antenna wire away from power wires
	Overloaded 12 volt power circuit	Check receiver for heavy loads on each circuit
	Weak car battery	Recharge or replace car battery
	Transmitter signal is being disrupted	Move atenna away from power wires
Transmitter has very short range	Reciever frequency is off	See Frequency Fine Tuning
	Transmitter battery is weak	See Battery Replacement
	Antenna wire needs repositioning	Stretch wire out away from wires carrying large current
Emergency override button does not work	Switch not hooked up correctly	Check ground connection
		Check wiring harness connection

If none of these solutions solve the problem, or the problem occuring is not l isted, please call Iowa Mold Tooling Co., Inc., Technical Support, (641)-923-3711, for further assistance.

BATTERY REPLACEMENT

Should the transmitter function become weak or erratic, the battery in the key chain transmitter may be weak. An indication of a weak battery is that the red indicator may have a dim glow to it when any button is pressed. The battery is replaced in the following manner:

A. Remove the small screw on the back of the transmitter case.
B. Carefully separate the case halves.
C. Remove the battery, noting the (+) and (-) positions.
D. Replace the battery with a new 12 volt type GP23A battery which is available at most electronic stores.
E. Carefully replace the top cover and refasten the screw.

FREQUENCY FINE TUNING

Should the transmitter have very short range or not operate at all, then fine tuning may be required. If the red indicator does not light or is dim, then replace the battery. To tune the receiver, perform the following:

A. Remove the 4 screws on top of the receiver case.
B. Carefully separate the case halves.
C. Locate the small white frequency fine-tune adjustment trimmer on the circuit board inside the receiver. It will be located near where the antenna wire exits the case.
D. Using a small non-metallic adjustment tool, turn the adjustment screw inside the blue trimmer 1/8 turn clockwise.
E. Depress button 'III' and check if the compartment light comes on. If not, turn the adjustment screw an additional turn clockwise and recheck. After turning the screw a total of 1/2 turn clockwise, return to it's starting position and repeat the adjustment by turning it counter-clockwise in the same manner.
F. Once the system operates the lights, stop and re-close the case. If the adjustment fails to correct the problem, return the defective unit for servicing.

PROGRAM ADDITIONAL TRANSMITTERS

Placing receiver into programming mode:

1. Unplug the main harness connector from the receiver unit.
2. Remove the receiver cover by taking out the four screws on top.
3. Locate the programming jumper pins labeled J1. They will be on the edge of the circuit board about 1/2 inch from the red programming light.
4. Short the programming pins together using a shorting jumper or small piece of wire.
5. Plug in the main harness connector so that the unit has power. The red prgramming light should come on.

Checking frequency adjustment:

1. Press button 'III'. If programming light flashes, step 2 may be skipped.
2. Using non-metallic screwdriver, turn the white tuning adjustment in receiver until the light flashes rapidly.

Programming transmitter:

1. Press button 'III'. This will place the system in 'check' mode.
2. Press buttons 'II' and 'III' at the same time. The red light should flash three times and then remain on. The system is now in 'store' mode.
3. Press button 'I' to store the transmitter code. The red light will flash twice to indicate the code has been stored. The system is now back in 'check' mode.
4. Press button 'I' again. The red light should flash indicating the code was stored successfully.

Returning unit to normal operation:

1. Unplug the main harness connector.
2. Remove the shorting jumper from the programming pins.
3. Replace the aluminum cover and reconnect the main harness.

This device complies with PArt 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

SERIAL NUMBERS PRED991001 TO PRESENT.

FLOOD LIGHT SWITCHING OPTION

On the wire harness, next to the right front connection, there are three Packard two-pin connectors. One of these connectors is a female, the other two are male connectors. Which male connector the female is inserted into will determine whether the flood lights are set in a front and back or a side to side configuration. The male connector which is not used has a dummy connector installed to protect against dirt and moisture. The end user has the option of configuring the flood light system to his requirements.

The hand held radio transmitter for the Predator wirelss light control system has four buttons. Each button controls one light circuit. Depending on the end user's configuration of the flood light option, the button labeled 'I' will control the right front flood and either the left front or right rear flood light. The button labeled 'II' will control the left rear flood and either the left front or the right rear flood light, again depending on the flood light option. The button labeled 'III' will control the four corner strobe light system. The button labeled 'IV' will control the compartment lights in all four compartments.

Any of the circuits may be activated by simply pushing the button on the hand held transmitter for a period of about 1 second. This circuit will be active until the same button is pushed again. All circuits will be shut off if the truck's ignition switch is turned off. The light circuit will remain off until reactivated by the transmitter or by the manual override switch.

All circuits may be activated by the manual override switches on the electrical control panel located inside the right front compartment. If the light circuit has been activated by the manual override switch, the light will continue to operate while the chassis ignition switch is on. The hand held transmitter can not be used to turn the light circuit off at this time. The light circuit will be locked in the on position, even with the ignition switch in the off position. This will energize the light circuit the next time the ignition switch is turned back to the on position. The light circuit will remain in the on position until the manual override switch has been changed back to the off position. The hand held transmitter then becomes operational at that time.

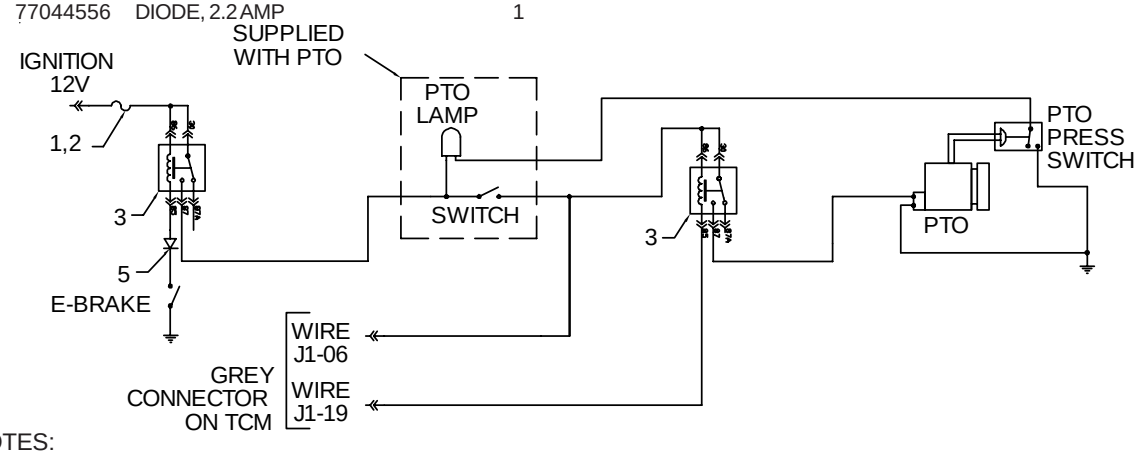
The ignition switch acts as the master switch, howerver, and shuts off all lighting circuits.

The dash mounted transmitter will control the lights, the same as the hand held transmitter, when it becomes available after FCC approval.

99903409.01 REV. B 20050520

INSTALLATION - PTO WIRING - ALLISON T1000/T2000 TCM 1 PTO (99903409-1)

1.	77044764	FUSE HOLDER W/O FUSE	1
2.	77041527	FUSE-ATC 7.5 AMP	1
3.	77041251	RELAY- P & B VF4-45F11	1
4.	77441047	TERMINAL-150 16-18 GA MALE	2
5.	77044556	DIODE, 2.2 AMP	1



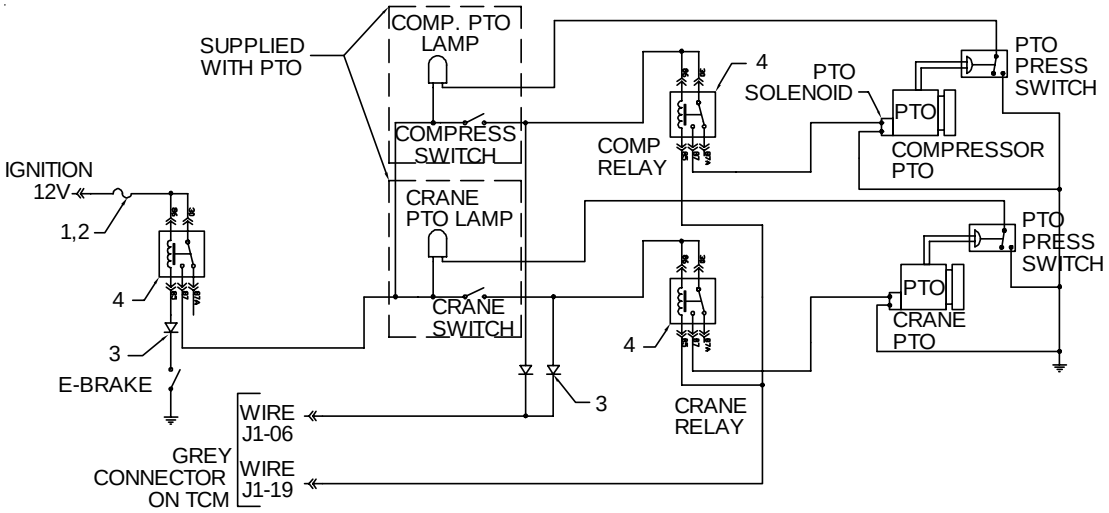
NOTES:

1. Different chassis may have different codes for the TCM wire numbers.
2. TCM for Freightliner is behind dash on passenger side of cab. Splice into appropriate wires at that location.
3. TCM for Sterling Actera is under the cab. Use customer access metripack connector located on driver's side wheel well. Use cavity "F" for wire J1-06 and use cavity "G" for J1-19. Use item #4 in the part's list.
4. TCM for International 4300 and 4400 models is under the cab. Use customer access metripack connector located on the driver's side, upper wheel well. Use cavity "B" for wire J1-06 and cavity "C" for J1-19. Use item #4 in the part's list.
5. GM Transmission Connector (Located near upfitter connector in the engine compartment on the right side) Wire 106 = Pin B; Wire 119 = Pin J

INSTALLATION - PTO WIRING - ALLISON T1000/T2000 TCM 2 PTO (99903409-2)

REV. B 20050520

1.	77044764	FUSE HOLDER W/O FUSE	1
2.	77041527	FUSE-ATC 7.5 AMP	1
3.	77044556	DIODE - 2.2 AMP/ 274V	2
4.	77041251	RELAY- P & B VF4-45F11	2
5.	77441047	TERM- 150 16-18GA MALE	2



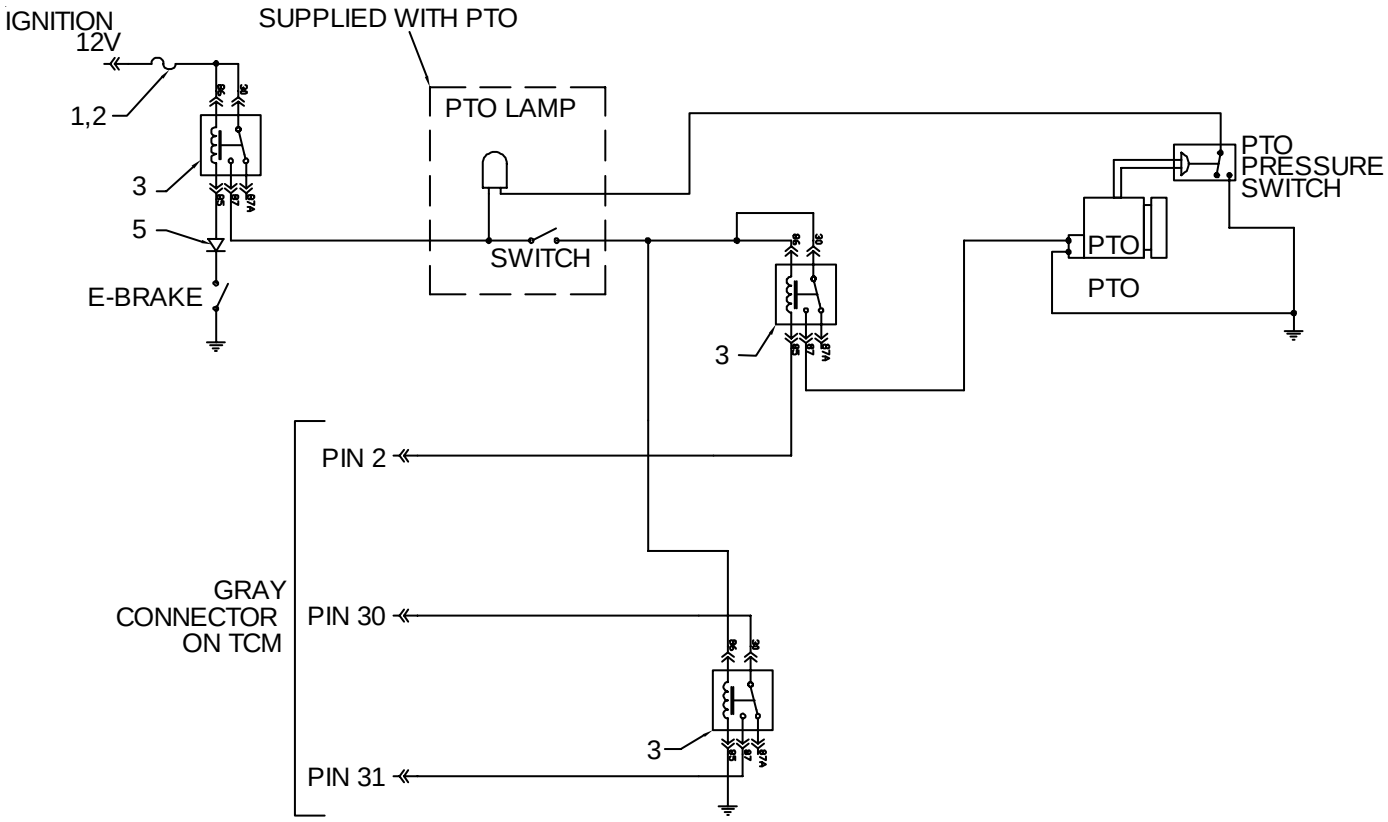
NOTES:

1. Different chassis may have different codes for the TCM wire numbers.
2. TCM for Freightliner is behind dash on passenger side of cab. Splice into appropriate wires at that location.
3. TCM for Sterling Actera is under the cab. Use customer access metripack connector located on driver's side wheel well. Use cavity "F" for wire J1-06 and use cavity "G" for J1-19. Use item #5 in the part's list.
4. TCM for International 4300 and 4400 models is under the cab. Use customer access metripack connector located on driver's side, upper wheel well. Use cavity "B" for wire J1-06 and cavity "C" for J1-19. Use item #5 in the part's list.
5. GM Transmission Connector (Located near upfitter connector in the engine compartment on the right side) Wire 106 = Pin B; Wire 119 = Pin J

SERIAL NUMBERS PRED991001 TO PRESENT.

INSTALLATION - PTO WIRING - ALLISON T3000/T4000 TCM 1 PTO (99903409-3)

1.	77044764	FUSE HOLDER W/O FUSE	1
2.	77041527	FUSE-ATC 7.5 AMP	1
3.	77041251	RELAY- P & B VF4-45F11	2
4.	77441047	TERM- 150 16-18GA MALE	3
5.	77044556	DIODE, 2.2 AMP	1



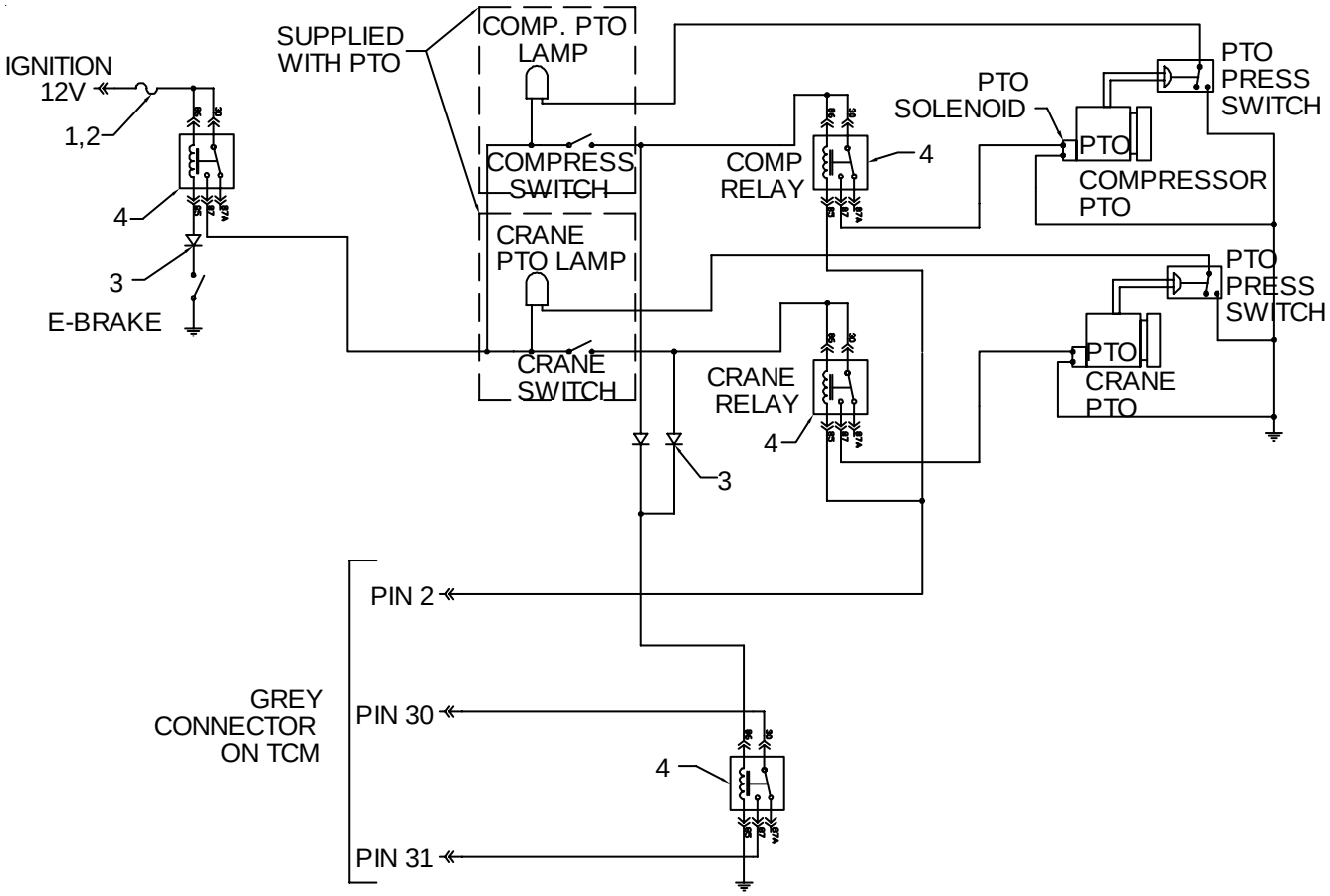
NOTES:
1. Different chassis may have different codes for the TCM wire numbers.

2. TCM for Freightliner is behind dash on passenger side of cab. Splice into appropriate wires at that location.

3. GM Transmission Connector:
(Located near the GM upfitter connector in the engine compartment on the right side)
Wire 114 = Pin A
Wire 117 = Pin B
Wire 161 = Pin J

INSTALLATION - PTO WIRING - ALLISON T3000/T4000 TCM 2 PTO (99903409-4)

1.	77044764	FUSE HOLDER W/O FUSE	1
2.	77041527	FUSE-ATC 7.5 AMP	1
3.	77044556	DIODE-2.2 AMP, 274 VOLT	3
4.	77041251	RELAY- P & B VF4-45F11	4
5.	77441047	TERM- 150 16-18GA MALE	REF



NOTES:

1. Different chassis may have different codes for the TCM wire numbers.

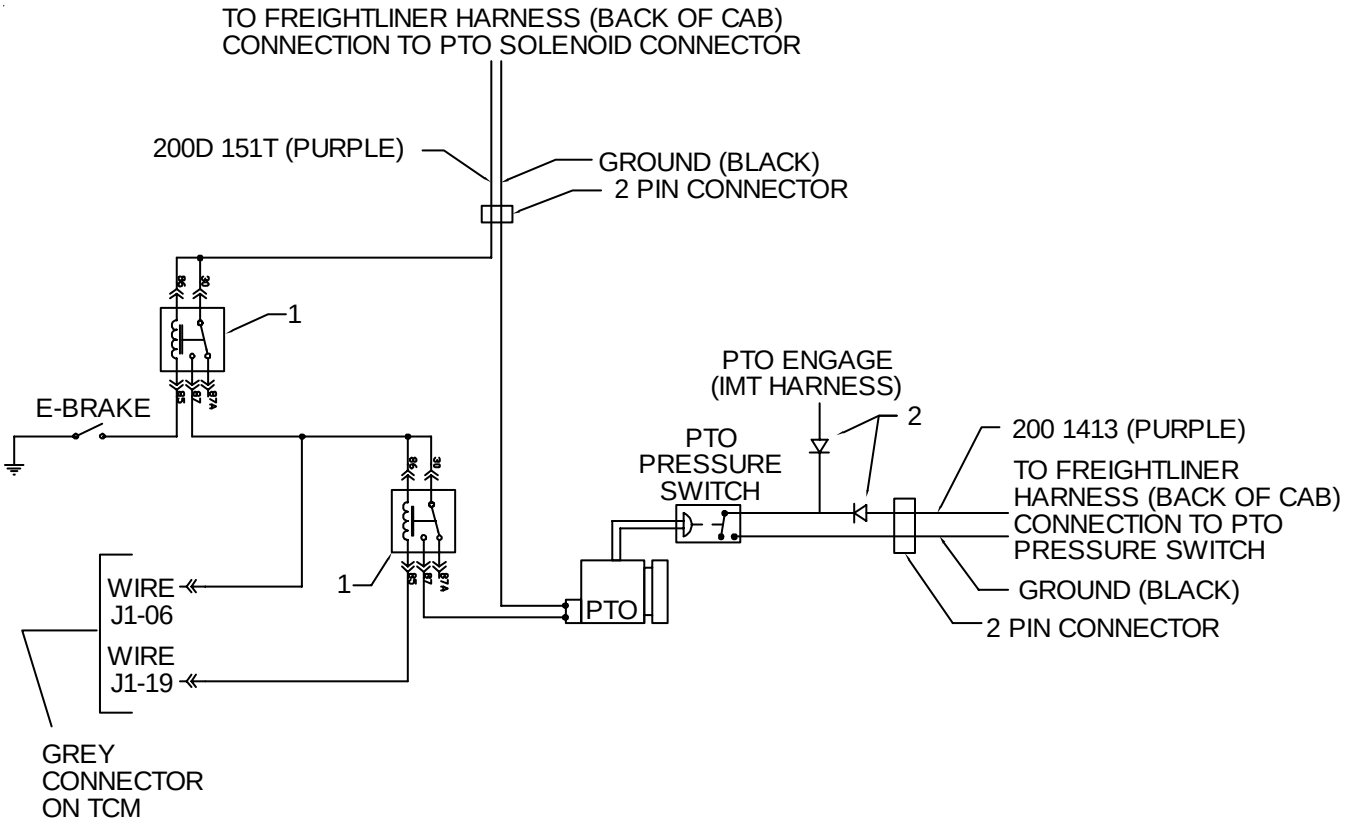
2. TCM for Freightliner is behind dash on passenger side of cab. Splice into appropriate wires at that location.

3. GM Transmission Connector: (Located near the GM upfitter connector in the engine compartment on the right side)
Wire 114 = Pin A; Wire 117 = Pin B; Wire 161 = Pin J

4. Use item #5 to connect.

INSTALLATION - PTO WIRING - ALLISON T3000/T4000 TCM 1 PTO ON FREIGHTLINER (99903409-5)

1. 77041251 RELAY- P & B VF4-45F11 2
2. 77044556 DIODE-2.2 AMP, 274 VOLT 2



NOTES:

1. Different chassis may have different codes for the TCM wire numbers.

2. TCM for Freightliner is behind dash on passenger side of cab. Splice into appropriate wires at that location.

3. GM Transmission Connector: (Located near the GM upfitter connector in the engine compartment on the right side)
Wire 114 = Pin A; Wire 117 = Pin B; Wire 161 = Pin J

4. Use item #5 to connect.

SECTION 5. LIFTGATE

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DECALS 12
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TWO-CYLINDER DIRECT LIFT LIFTGATE (EDL16 SERIES)

Models EDL 16-78 and EDL 16-86 (1600 lb capacity, 50" travel)

CAUTION

It is important to follow the instructions set forth in this section to insure proper operation of the liftgate. Failure to follow these instructions can cause serious injury or death.

CAUTION

As final stage manufacturer, the installer of this liftgate is responsible for compliance with all pertinent state and federal safety standards, as well as for following recommendations of chassis manufacturer.

FORWARD

This section provides installation and operating procedures to help you obtain efficient and dependable use from your hydraulic liftgate. This section contains specifications, parts lists, maintenance information, safety guidelines, and general information.

Read this section carefully and understand it before attempting to install, operate, maintain, or repair the liftgate. Keep this savailable for future reference. If at any time you have questions concerning the liftgate, contact your IMT dealer. The dealer has trained service technicians and IMT replacement parts to keep your liftgate in top operating condition.

Three means are used throughout this section to gain the attention of personnel. They are NOTE's, CAUTION's and WARNING's and are defined as follows:

NOTE

A NOTE is used to either convey additional information or to provide further emphasis for a previous point.

CAUTION

A CAUTION is used when there is the very strong possibility of damage to the equipment or premature equipment failure.

WARNING

A WARNING is used when there is the potential for personal injury or death.

Treat this equipment with respect and service it regularly. These two things can add up to a safer working environment.

WARNING

All operators must be fully instructed in the use of liftgate and all applicable safety standards before using or operation. Read and understand this section and comply with the instructions. Failure to do so may result in serious injury or death.

INTRODUCTION

The liftgate is the finest on the market today, but in order to provide maximum efficiency it is important that you operate and maintain the liftgate properly. This section contains information necessary for the proper operation and maintenance of the liftgate. Before operating the liftgate, study this section carefully and keep it available for future reference.

GENERAL PRECAUTIONS

1. Always stand clear of an operating liftgate. Feet and hands must be clear of space between liftgate and truck when raising, and clear of space between liftgate and ground when lowering. Keep away from lifting linkage (arms) while liftgate is in operation.

2. The liftgate is not a personnel lift - DO NOT RIDE

3. Improper operation can result in serious injury or death. Read and understand operating instructions before use.

4. Any alteration to the liftgate will void the warranty and may void compliance with the Federal Motor Vehicle Safety Standards (FMVSS)

5. Only authorized, properly trained adults may operate the liftgate.

6. When not in use. always store the platform in the closed position with both storage lock latches secured.

7. Never leave the liftgate unattended with the key in the ignition of the vehicle.

8. All decals must be present and legible. Replace any damaged or missing decals immediately.

9. Never exceed the rated load capacity. Always center the load on platform and as close to truck as possible.

10. Always disconnect the negative (-) battery cable terminal when welding on liftgate or truck.

SPECIFICATIONS

OVERALL HEIGHT	47”
OVERALL WIDTH	
EDL 16-78	85-3/4”
EDL 16-86	91-1/4”
WIDTH BETWEEN UPRIGHTS	
EDL 16-78	74-1/2”
EDL 16-86	80”
TRUCK BED TO BOTTOM OF UPRIGHT	19-1/2”
RATED PLATFORM TRAVEL	50”
RATED LOAD CAPACITY (lifting & lowering)	1600 lbs
DUAL HYDRAULIC CYLINDER SIZE	
BORE	2-1/2”
STROKE	18”
PUMP/MOTOR RESERVOIR CAPACITY	334 cu. in.
PUMP OPERATING PRESSURE	1250 psi
ELECTRICAL SYSTEM	12V, 180A max. draw @ 1250 psi

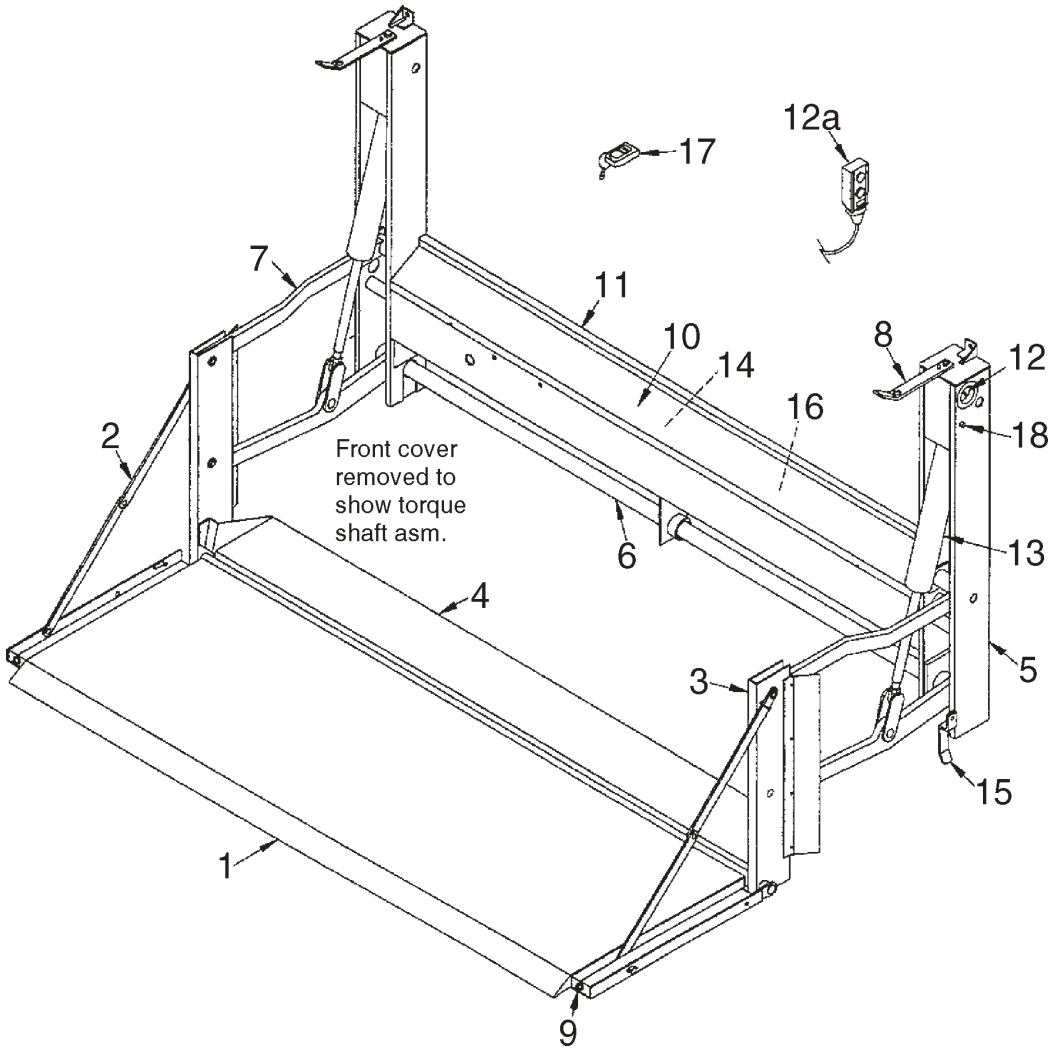
LIFTGATE TERMINOLOGY

LIFTGATE # 70733154 (See drawing below.)

1. PLATFORM
2. PLATFORM SUPPORT LINKS
3. PLATFORM UPRIGHT
4. FLASE FLOOR
5. MAIN HOUSING UPRIGHT
6. LOWER LIFT ARM/TORGQUE SHAFT ASM
7. UPPER PARALLEL ARM
8. STORAGE LATCH
9. STORAGE LATCH PIN
10. MAIN HOUSING COVER
11. MAIN HOUSING
12. CONTROL SWITCH

12a. HAND HELD REMOTE CONTROL (optional)

13. HYDRAULIC CYLINDER ASM (2)
14. HYDRAULIC POWER UNIT (inside main housing)
15. FOLD DOWN LATCH
16. REMOTE ACTIVATION ENABLE/DISABLE CONTROL BOX (inside main housing)
17. REMOTE TRANSMITTER WIRELESS (key ring style) (optional)
18. RED LED POWER INDICATOR LIGHT



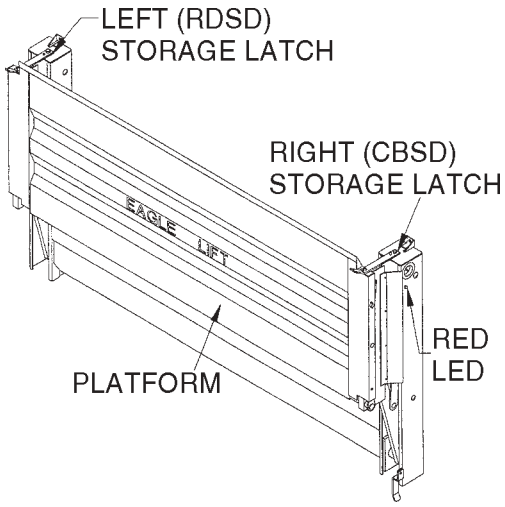
SERIAL NUMBERS PRED991001 TO FALL 2010

OPERATING INSTRUCTIONS (OPTIONAL HAND-HELD REMOTE)

1. Using hand held transmitter, aim toward center of liftgate main housing and depress thumb switch. This starts a 90 second timer that reactivates each time you raise liftgate. The red LED located by control switch will light when when there is power to the switch.

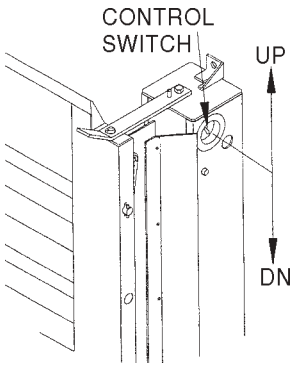
2. Unlatch left (RDSD) storage latch by lifting up and turning outward.

3. Unlatch right (CBSD) storage latch by lifting up. Manually lower platform down to level position.



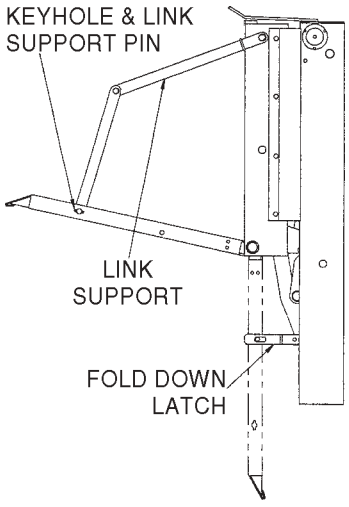
4. To lower platform to ground:
Press down on control switch. You may stop platform at any desired height by releasing control switch (switch should automatically return to neutral position upon release).

5. To raise platform to truck bed:
Lift up on control switch. Note that an audible safety alarm sounds when you raise liftgate. This is an important safety feature for benefit of operator and other personnel. Timer automatically shuts down power in 90 seconds and red LED goes out when liftgate is not in use.



6. To store gate:
Raise platform until level with truck bed. Manually lift platform to closed position. CBSD storage latch will engage latch onto platform latch pin.

7. To place platform in drop-away position:
Manually lift platform, at same time left RDSD platform link support upward at hinge point. This allows keyhole of platform and link support pin to line up. Disconnect link support from platform. Repeat procedure for CBSD link support. Platform will now drop-away for dock or forklift loading. Secure platform with fold-down latch located near bottom of CBSD upright.



WARNING

Platform is spring loaded and under considerable compression when locked in down position for dock loading. Use extreme care when latching and unlatching to prevent injury.

CAUTION

Use of drop-away is to be used only for loading at docks or with forklifts. Do not store platform in this position.

SERIAL NUMBERS PRED991001 TO FALL 2010

PREVENTATIVE & REGULAR SERVICE

1. Check pins and retaining rings for wear and damage.

CAUTION

Replace immediately if missing or worn.

2. Inspect all pins, shafts, retaining rings, bolts, nuts, and roll pins.

CAUTION

Replace immediately if missing or worn.

3. Inspect all wedls for cracks or fatigue. If found, repair welds as required. It is recommended that this be performed by an authorized dealer.
4. Check oil level in reservoir of pump.
   a. Proper fluid level is approximately 1-14" below top reservoir tank with cylinder fully extended (platform lowered to ground).

   b. Fill reservoir with 10W - 30W hydraulic oil or Dextron II ATF. Use a special high viscosity oil in cold weather. Unit shipped with Artctic Flo™ Hydraulic Oil.
5. Inspect fittings, hoses, pump assembly, and cylinder for leakage. Repair or replace as needed. See Cylinder Seal Replacement in this section
6. Inspect all electrical connections for tightness, corrosion, or damage. Make repairs as necessary.
   a. Check battery terminals for proper connections, tightness, and corrosion.

   b. Inspect battery cell fluid levels according to manufacturer's instructions.

SAFETY EQUIPMENT CHECKLIST

1. Warning alarm sounds when gate is lifting.
2. Gate does not operate unless remote system is activated (red LED "on"). Make sure all electrical power shuts off in 90 seconds (red LED "off").
3. When stored, safety storage latches hold liftgate platform securely in place.
4. All decals are in place, undamaged and legible.

TROUBLESHOOTING

1. Liftgate does not raise to proer height, but unit is running.
   a. Check fluid level in reservoir. Add fluid if level is more than 1-1/4" below top of reservoir tank with cylinder fully extended.

   b. Platform overloaded. Remove some of the load.

CAUTION

Do not exceed 1600 lbs capacity of the liftgate. Doing so will cause damage.

2. Platform will not raise, but warning alarm is working.
   a. Batery charge is low. Start vehicle so alternator will supply enough charge to raise platform. Charge battery or replace with higher amp output battery.

   b. Problem in cehicle's electrical charging system. Diagnose and repair as necessary.

3. Platform will not raise and warning alarm is not working.
   a. Check remote system
   •Transmitter battery needs replacement. Pry two halves of transmitter apart and replace battery with a No. A23, 12VDC battery.

   •Check for blown fuse. Replace 5 amp fuse in liftgate wiring harness. See Electrical Wiring Diagram in this section.

   •Receiver unit defective. Use a test light to check for 12 VDC at small terminal on motor solenoid. If 12 VDC is not present and remote receiver unit is fault, desconnect wire harness from receiver blx and plug in bypass plug end into harness. See Electrical Wiring Diagram in this section.

   •Receiver unit defective. Use a test light to check for 12 VDC at small terminal on motor solenoid. If 12 VDC is not present and remote receiver unit is fault, disconnect wire harness from receiver box and plug in bypass plug end into harness. See Electrical Wiring Diagram in this section.

CAUTION

Use bypass plug only in emergency situations and replace defective unit immediately.

   b. Short in electrical cable
   •Electrical cable pinched or cut by a sharp object on truck frame or burned by exhuast system. Repair as necessary.

CAUTION

Shorting of electrical cable may cause extensive damage to vehicle's electrical system.

   c. Short in remote wiring system.
   •Wire pinched or cut by sharp object in liftgate housing or by cable lifting system. Remote electrical box fuse may fail. (See 3a above). Repair wire, replace 5 amp fuse, and test system for proper operation.

   d. Bad solenoid on liftgate pump/motor.
   •Replace solenoid and check all of the following:
   •Battery charge low. Charge battery or replace with higher amp ouput battery. Check vehicle's charging system.

   •Poor battery terminal connection. Tighten terminal connections or replace cables.

   •Electrical short in vehicle's or liftgate's remote wiring system. See 3b and 3c above.

   •Poor grade replacement electrical wiring. Use only good quality, 105°C approved electrical wire.

   •Use di-electric grease on all terminals to prevent corrosion and poor electrical connections.

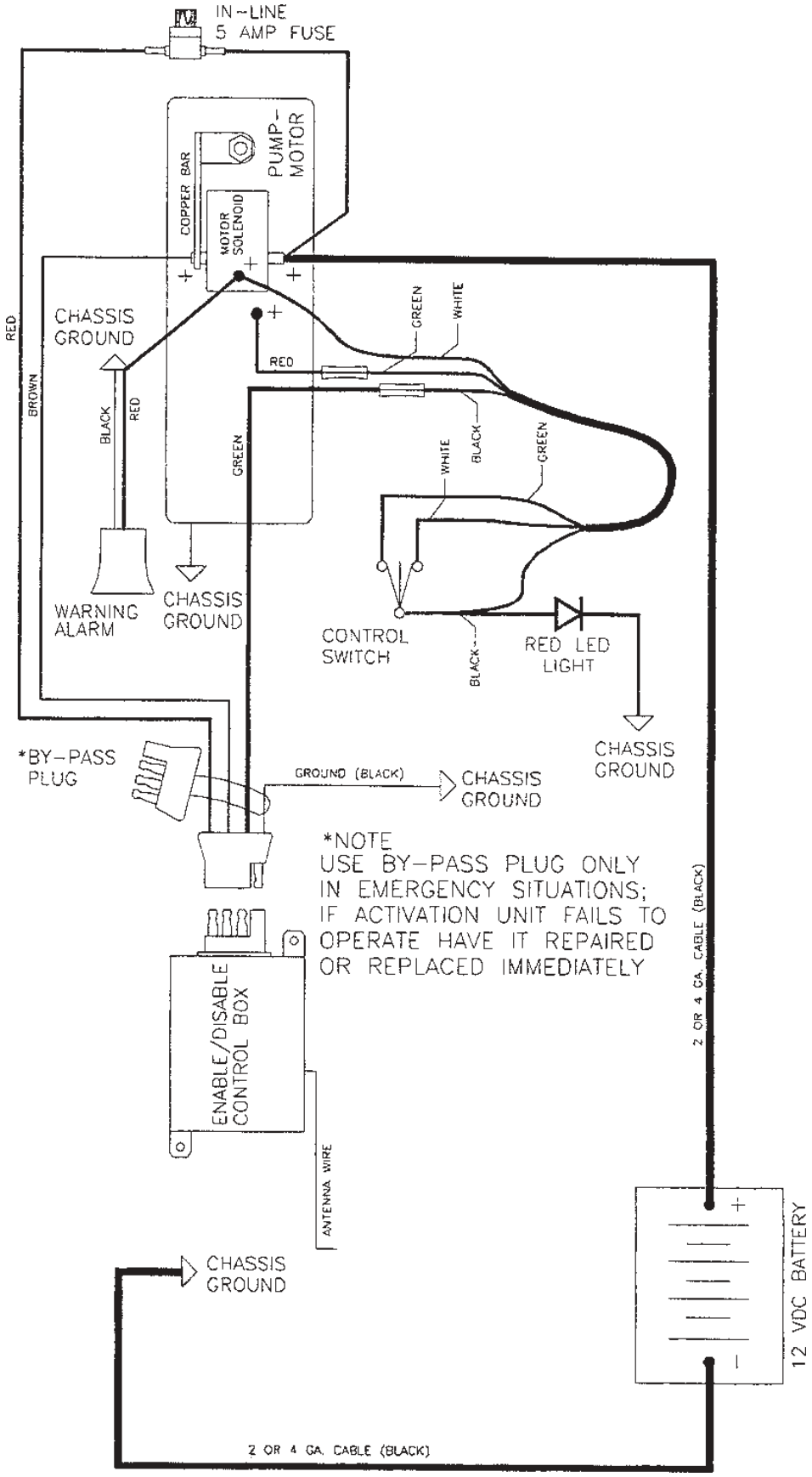
NOTE

If you are unable to make repairs, contact an authorized distributor or the factory.

WARNING

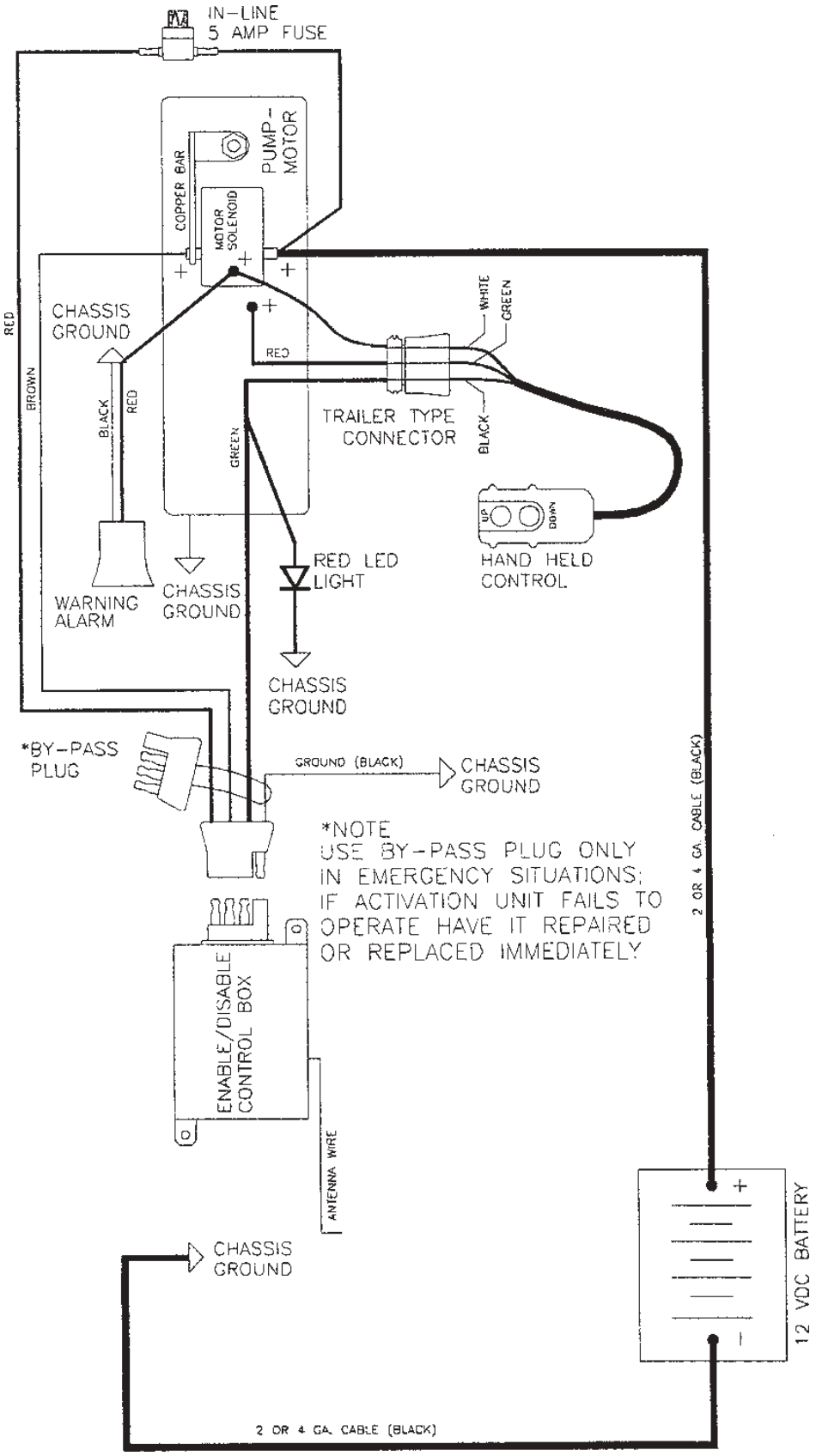
Replace all abused or malfunctioning parts immediately.

ELECTRICAL WIRING DIAGRAM-MANUAL CONTROL (TOGGLE SWITCH)



SERIAL NUMBERS PRED991001 TO FALL 2010

ELECTRICAL WIRING DIAGRAM-OPTIONAL REMOTE CONTROL (HAND HELD PUSH BUTTON)



SERIAL NUMBERS PRED991001 TO FALL 2010

CYLINDER SEAL REPLACEMENT

CAUTION

Cylinder rebuild should be done only by an authorized dealer or skilled professional familiar with hydraulic products. Contact factory before attempting repair.

1. Lower platform to ground and remove main housing cover.

2. Remove hose from pump fitting.

3. Remove cylinder (with hose attached) from liftgate upright housing.

4. Clamp cylinder in a vise. Do not over clamp. Place hose end into a container to catch hydraulic fluid and stroke cylinder back and forth to empty all fluid.

5. Remove 3 bolts and snap ring hodling cylinder shaft gland in place.

6. Pull cylinder shaft, gland, and piston assembly out of cylinder case.

7. Remove piston lock nut from cylinder shaft. Remove piston and glad from shaft.

8. Replace seals:
   a. Remove all seals and o-rings from both piston and gland.
   b. Install new o-ring and seals on gland. Slide shaft through gland. See drawing for proper direction of gladn onto shaft. Wiper seal goes toward clevis end.
   c. Install new o-rings and seals onto piston. Do not allow piston seal to twist when installing into piston groove. Replace piston onto cylinder shaft. See drawing.
   d. Apply Loctite™ to piston nut thread and replace nut onto cylinder shaft. Torque nut to 80-90 ft-lbs.

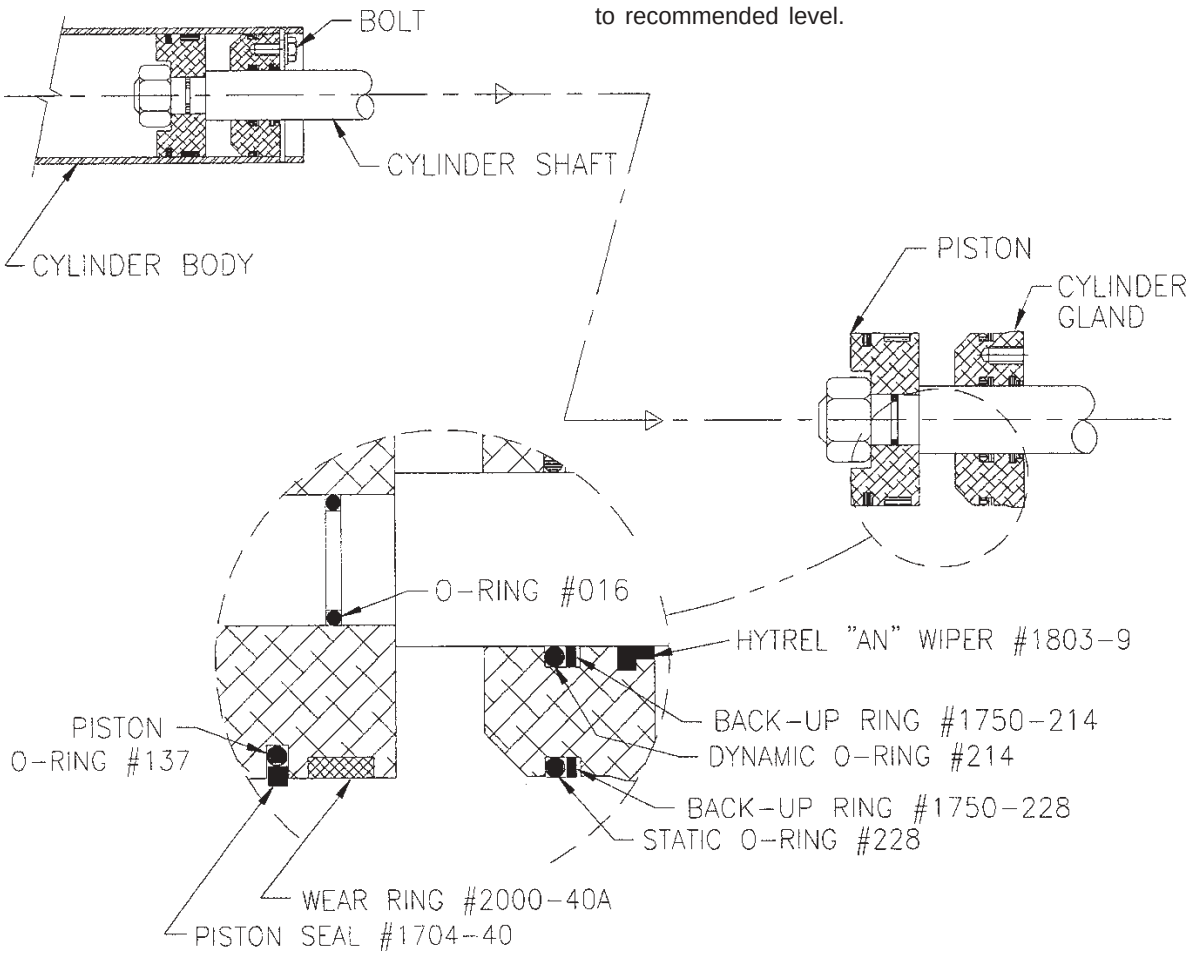
9. Apply lubricant to piston and gland seals. Reinsert cylinder shaft, gland, and piston assembly into cylinder case.

10. Replace snap ring and bolts to secure gland in place. Do not over tighten bolts.

11. Reinstall cylinder into upright housing; feeding hose into main housing. Reinstall cylinder pins and clip rings.

12. Apply pipe thread sealant to hose end and reconnect to pump fitting.

13. Operate liftgate up and down several times to purge air out of cylinder, lower liftgate to ground, andfill reservoir to recommended level.



SERIAL NUMBERS PRED991001 TO FALL 2010

CUSTOMIZING REMOTE ACTIVATION UNIT CODE SETTINGS

You may customize your remote activation unit's code setting so that an operator of another IMT lift remote activation transmitter will not interfere with your liftgate. All remote activation units (Enable/Disable receiver box and hand held transmitter) have DIP switches set at the factory as shown in the following drawing.

1. Remove Enable/Disable receiver box from liftgate, disconnect from wireing harness, and remove screws from bottom of box.
See Liftgate Parts Drawing.

2. Pry apart hand held transmitter. Remove battery.

CAUTION

Set DIP switches in both receiver box and hand held transmitter identically. Do not change the T1 and T2 switches in receiver box. Refer to following drawing to make sure these switches are set correctly.

3. You may only change the first ten (10) DIP switches. You must set all ten identically in both receiver box and hand held transmitter

a. Use a small blade screwdriver or paper clip bent straight to move switches. You need only change one switch, but to avoid simulating settings used by another liftgate, we recommend that you change at least three (3) switches.

b. When finished, hold receiver box and hand held transmitter side by side to double check that DIP switch settings are identical.

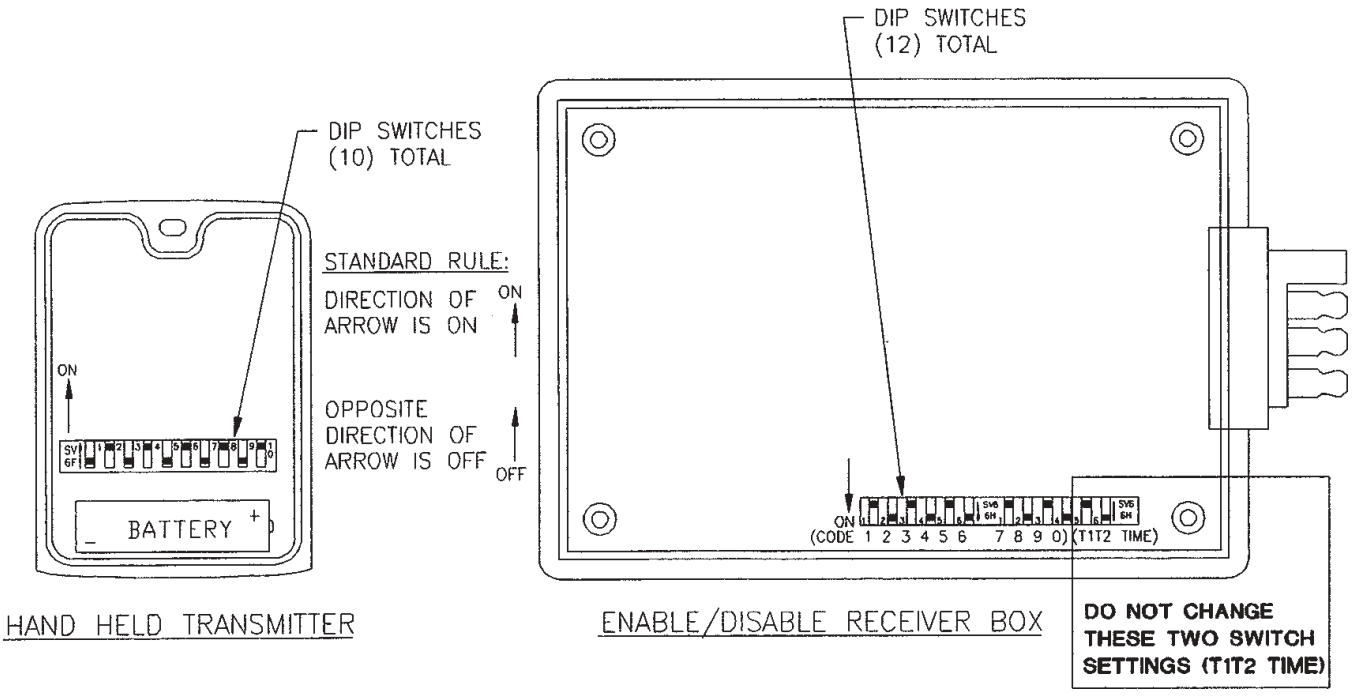
4. Reinstall battery in hand held transmitter and connect two plastic halves together.

5. Install screws and cover onto Enable/Disable receiver box, plug into wiring harness, and put box back in liftgate.

6. Test system by depressing thumb control on hand held transmitter. Red LED should come on and liftgate should operate normally. Depress thumb control again. Red LED should turn off and power should shut off.

NOTE

If you have trouble with this procedure and are unable to make repairs, contact your distributor or the factory.



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ELECTRICAL CONNECTIONS

CAUTION

Always follow vehicle manufacturer's recommendations for auxiliary wiring.

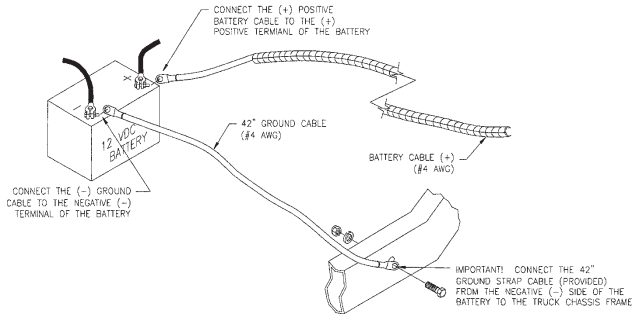
WARNING

Always disconnect vehicle's negative (-) battery lead before installing new or auxiliary wiring.

1. Carefully pull power cable through rubber grommet in back of liftgate main housing. Determine length of cable required and cut to length. Attach battery lug to cable.

2. Place long cable in protective loom. Carefully string cable along vehicle frame (not in and out of frame holes). Keep wire away from exhaust system and any sharp points that may cause a short. Secure cable to frame with 6" nylong ties provided.

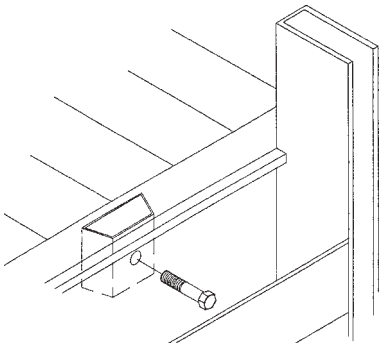
3. Connect power cable to positive (+) terminal of battery. Connect 42" ground cable to vehicle chassis frame and to negative (-) terminal of battery. See drawing below.



4. Unlatch and lower platform to ground. Follow operating instructions.

5. Remove liftgate housing cover.

6. Drill three 1/2" holes through liftgate main housing and rear rail of body (one near each upright and one in center). Secure with three 1/2" X 1-1/4" bolts, lock washers, and nuts. See drawing.



7. Attached to power unit is an envelope containing a vent plug. Remove solid plastic plug from power unit and screw vent plug into place. Solid plastic plug is for shipping purposes only.

8. Replace housing cover.

9. Check liftgate for proper operation. Follow previous operating instructions.

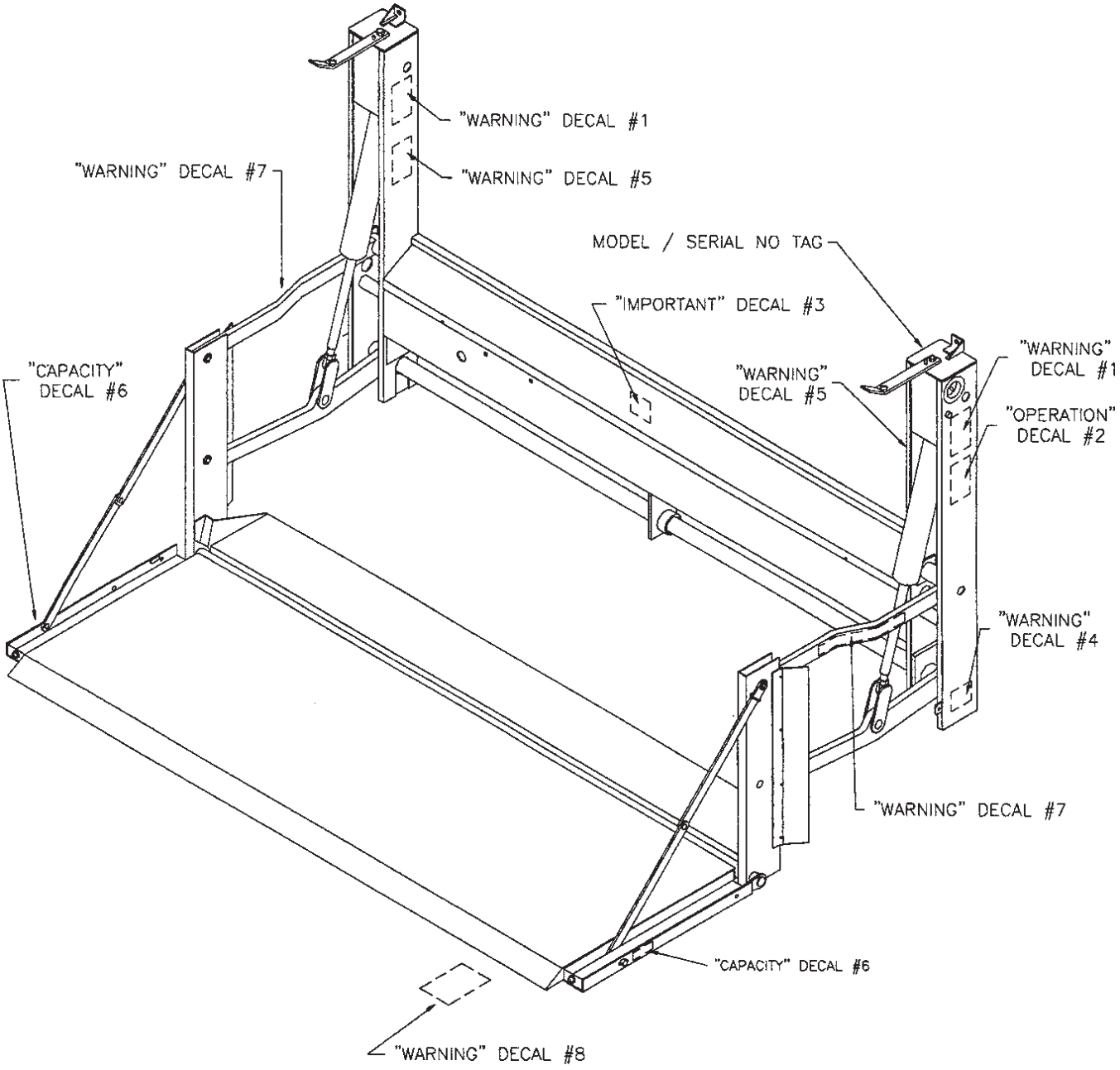
10. Review installation procedures to make sure all necessary steps are complete.

FINAL INSPECTION CHECKLIST

- Liftgate is properly positioned on vehicle.
- All liftgate mounting bolts are tight.
- Battery cable is properly routed and inside loom.
- Liftgate operates only by way of remote control and times out at 90 seconds with disuse.
- Warning alarm sounds when raising gate.
- All decals are in place and legible.
- Safety storage latches secure platform in closed position.
- Control handle automatically returns to neutral position.
- Hydraulic fluid at proper level and no leaks at connections.
- Vehicle meets all state and federal safety standards.
- License plate and light installed.

LIFTGATE DECAL PLACEMENT

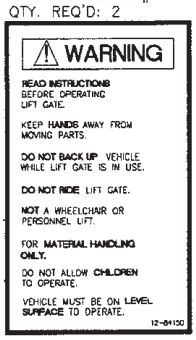
All Caution and Operation decals must be present and legible at all times. When ordering replacement decals, give model and serial number of the liftgate.



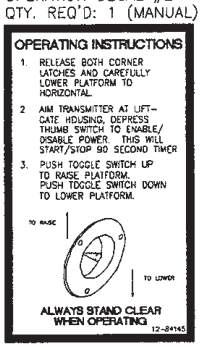
SERIAL NUMBERS PRED991001 TO FALL 2010

DECALS

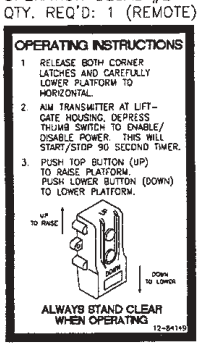
WARNING DECAL #1
QTY. REQ'D: 2



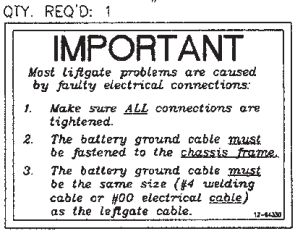
OPERATION DECAL #2
QTY. REQ'D: 1 (MANUAL)



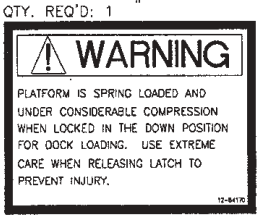
OPERATION DECAL #2
QTY. REQ'D: 1 (REMOTE)



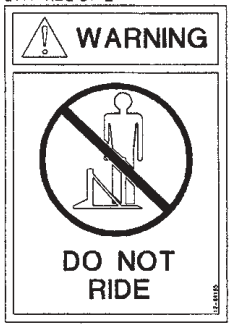
IMPORTANT DECAL #3
QTY. REQ'D: 1



WARNING DECAL #4
QTY. REQ'D: 1

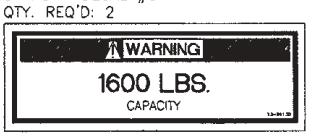


WARNING DECAL #5
QTY. REQ'D: 2

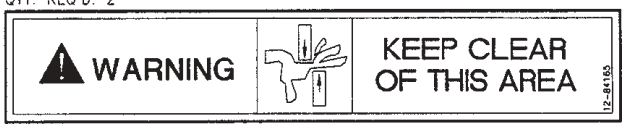


WARNING DECAL #8
QTY. REQ'D: 1

CAPACITY DECAL #6
QTY. REQ'D: 2



WARNING DECAL #7
QTY. REQ'D: 2

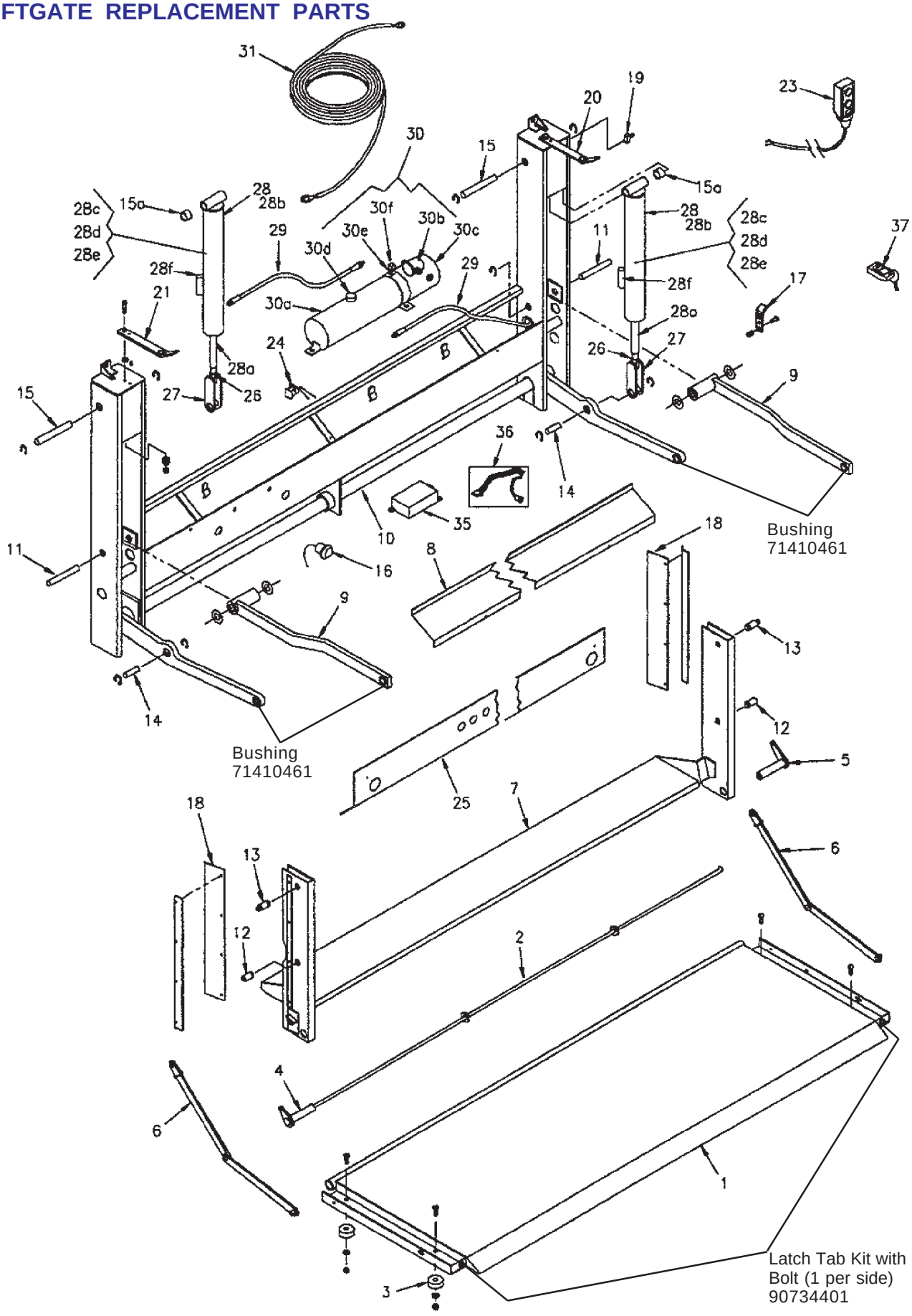


CONTINUED ON FOLLOWING PAGE

LIFTGATE REPLACEMENT PARTS

1.	70733379	PLATFORM ASM	1
2.	70145020	TORSION SPRING	1
3.	70733086	PLATFORM BUMPER KIT (SET OF 4 - INCL: HARDWARE)	1
4.	70145283	SPRING LOCK - RDSD	1
5.	70145284	SPRING LOCK - CBSD	1
6.	70733362	PLATFORM LINK ASM	2
7.	70733360	PLATFORM HOUSING ASM	1
8.	70733424	HOUSING COVER	1
9.	70733425	UPPER PARALLEL ARM ASM (INCL:NYLON WASHERS)	2
10.	70733426	LOWER ARM/TORQUE SHAFT ASM	1
11.	70145916	UPPER PARALLEL ARM PIN (INCL:RETAINING RING)	2
12.	70145286	PIVOT PIN (INCL:RETAINING RING)	2
13.	70145288	LINK PIVOT PIN (INCL:RETAINING RING)	2
14.	70145838	CYLINDER CLEVIS PIN (INCL:RETAINING RING)	2
15.	70146091	CYLINDER TRUNNION PIN (INCL:RETAINING RING)	2
15a.	70146092	CYLINDER TRUNNION SPACER	2
16.	77041583	LICENSE PLATE LIGHT	2
17.	70733427	FOLD DOWN LATCH KIT (INCL: HARDWARE)	1
18.	76395478	RUBBER BELT SEAL	2
19.	70041563	TOGGLE SWITCH W/BOOT	1
20.	70733361	STORAGE LATCH KIT - CBSD (INCL:HARDWARE)	1
21.	70733428	STORAGE LATCH KIT - RDSD (INCL:HARDWARE)	1
22.	70733429	CAP SET (INCL:3-LATCH) (NOT SHOWN)	1
23.	77041584	CONTROL BOX W/7' CORD (RMT PUSH BUTTON CTRL) (OPT)	1
24.	77040393	AUDIBLE SAFETY (BACK-UP)ALARM	1
25.	70733431	COVER, TORQUE SHAFT	1
26.	72062280	NUT 3/4-16 JAM	2
27.	70733363	CYLINDER CLEVIS ASM	2
28.	73050169	CYLINDER ASM-COMPLETE (INCL:CLEVIS & FLOW VALVE)	2
28a.	70145902	CYLINDER SHAFT	2
28b.	73050173	CYLINDER BODY (INCL: ELBOW)	2
28c.	73050176	CYLINDER GLAND/GUIDE BUSHING	2
28d.	73050177	CYLINDER PISTON	2
28e.	73050178	CYLINDER SEAL KIT	2
28f.	73054942	FLOW CONTROL VALVE	2
29.	73050181	HYDRAULIC HOSE ASM	2
30.	73051885	HYDRAULIC PUMP/MOTOR ASM	1
30a.	73050179	RESERVOIR W/SEAL	1
30b.	77041585	SOLENOID SWITCH (3 TERMINAL)	1
30c.	77043049	MOTOR	1
30d.	70733430	CAP ASM/VENT PLUG	1
30e.	73050180	ADAPTER, STREET TEE 1/4NPT	1
31.	77041586	CABLE ASM (INCL:TERMINALS)	1
32.	77041587	GROUND CABLE ASM (INCL:TERMINALS) (NOT SHOWN)	1
33.	95715295	DECAL SET (NOT SHOWN)	1
34.	70146093	CLIP RING SET (NOT SHOWN)	1
35.	77041588	RMT ENABLE/DISABLE ELEC BOX	1
36.	77041589	RMT WIRING HARNESS	1
37.	77041590	RMT HAND HELD XMTR W/BATT	1
38.	77041591	RED LED PWR IND (NOT SHOWN)	1

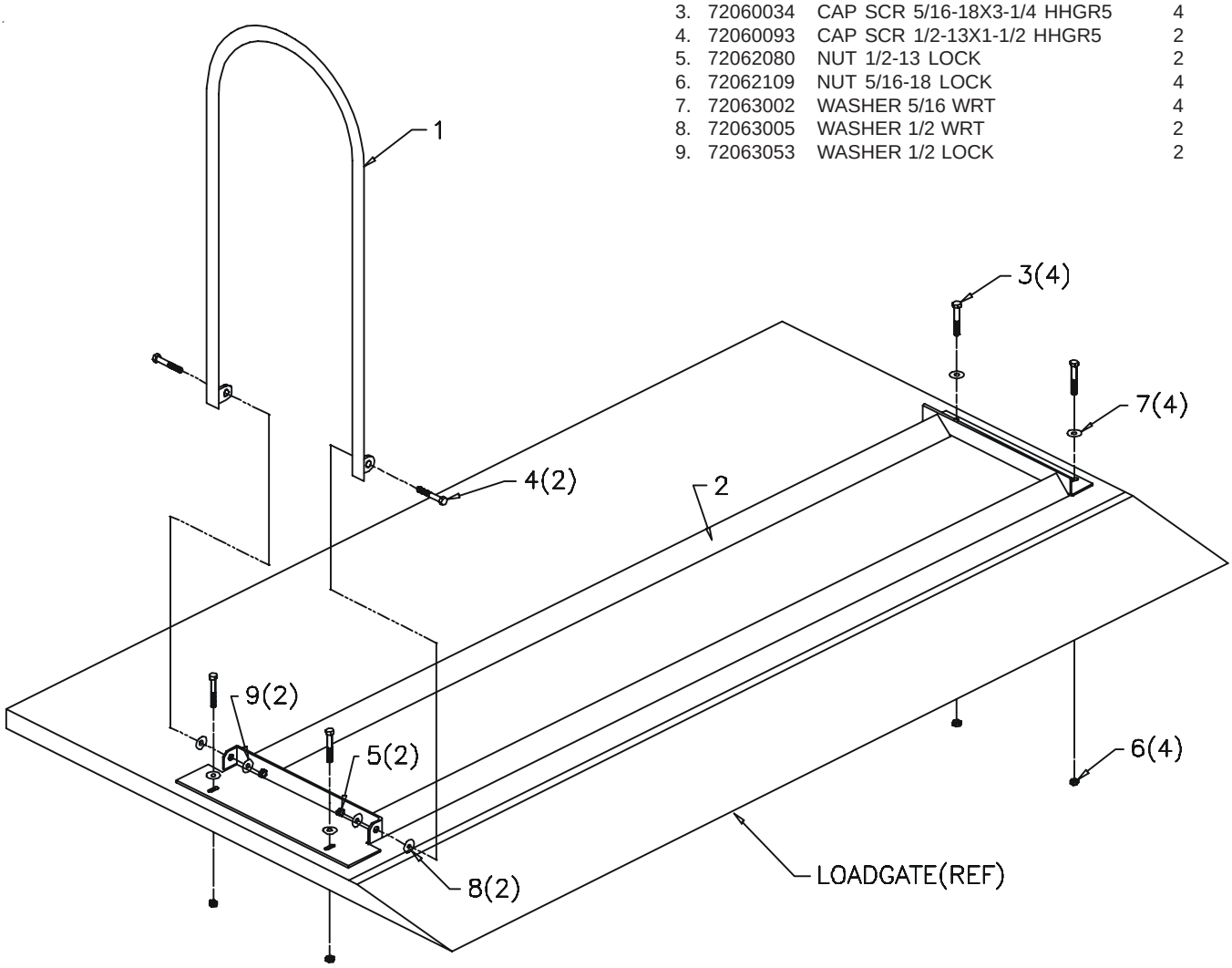
LIFTGATE REPLACEMENT PARTS



SERIAL NUMBERS PRED991001 TO FALL 2010

LIFTGATE SIDE RAIL (51706132)

1.	52706335	SIDE RAIL	1
2.	52706337	TIRE STOP	1
3.	72060034	CAP SCR 5/16-18X3-1/4 HHGR5	4
4.	72060093	CAP SCR 1/2-13X1-1/2 HHGR5	2
5.	72062080	NUT 1/2-13 LOCK	2
6.	72062109	NUT 5/16-18 LOCK	4
7.	72063002	WASHER 5/16 WRT	4
8.	72063005	WASHER 1/2 WRT	2
9.	72063053	WASHER 1/2 LOCK	2



SECTION 5. LIFTGATE

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LIFTGATE FUNCTIONS & 3
COMPONENT IDENTIFICATION 3
SAFETY DECALS & LOCATIONS 4
LIFTGATE OPERATION 6
LIFTGATE ADJUSTMENT 7
PLATFORM DROP-AWAY FEATURE 9
WIRING DIAGRAM 10
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TROUBLESHOOTING 12
TROUBLESHOOTING 13
LIFTGATE REPLACEMENT PARTS (70734521 / 70734522) 14

LIFTGATE INSTRUCTIONS (70734521 / 70734522)

CAUTION

Be sure to follow the instructions set forth in this section to insure proper operation of the liftgate. Failure to follow these instructions can cause serious injury or death.

CAUTION

As final stage manufacturer, the installer of this liftgate is responsible for compliance with all pertinent state and federal safety standards, as well as for following recommendations of chassis manufacturer.

FORWARD

This section provides installation and operating procedures to help you obtain efficient and dependable use from your hydraulic liftgate. This section contains specifications, parts lists, maintenance information, safety guidelines, and general information.

Read this section carefully and understand it before attempting to install, operate, maintain, or repair the liftgate. Keep this savailable for future reference. If at any time you have questions concerning the liftgate, contact your IMT dealer. The dealer has trained service technicians and IMT replacement parts to keep your liftgate in top operating condition.

Three means are used throughout this section to gain the attention of personnel. They are NOTE's, CAUTION's and WARNING's and are defined as follows:

NOTE

A NOTE is used to either convey additional information or to provide further emphasis for a previous point.

CAUTION

A CAUTION is used when there is the very strong possibility of damage to the equipment or premature equipment failure.

WARNING

A WARNING is used when there is the potential for personal injury or death.

Treat this equipment with respect and service it regularly. These two things can add up to a safer working environment.

WARNING

All operators must be fully instructed in the use of liftgate and all applicable safety standards before using or operation. Read and understand this section and comply with the instructions. Failure to do so may result in serious injury or death.

INTRODUCTION

The liftgate is the finest on the market today, but in order to provide maximum efficiency it is important that you operate and maintain the liftgate properly. This section contains information necessary for the proper operation and maintenance of the liftgate. Before operating the liftgate, study this section carefully and keep it available for future reference.

GENERAL PRECAUTIONS

1. Always stand clear of an operating liftgate. Feet and hands must be clear of space between liftgate and truck when raising, and clear of space between liftgate and ground when lowering. Keep away from lifting linkage (arms) while liftgate is in operation.
2. The liftgate is not a personnel lift - DO NOT RIDE

3. Improper operation can result in serious injury or death. Read and understand operating instructions before use.

4. Any alteration to the liftgate will void the warranty and may void compliance with the Federal Motor Vehicle Safety Standards (FMVSS)

5. Only authorized, properly trained adults may operate the liftgate.

6. When not in use, always store the platform in the closed position with storage lock latches secured.

7. Never leave the liftgate unattended with the key in the ignition of the vehicle.

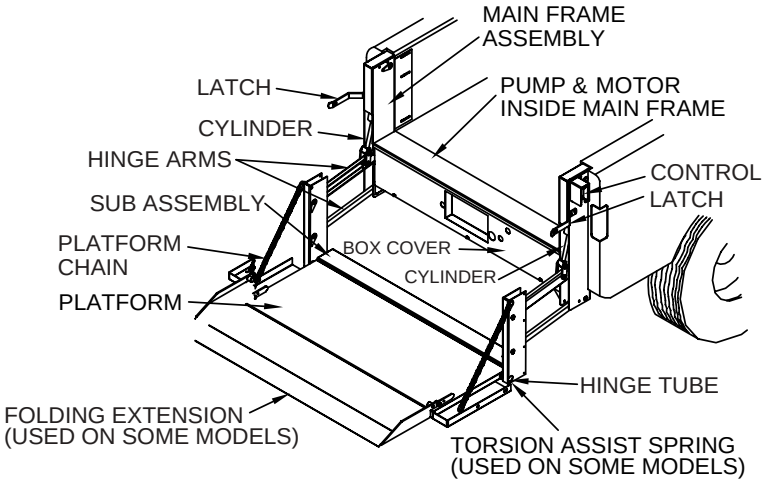
8. All decals must be present and legible. Replace any damaged or missing decals immediately.

9. Never exceed the rated load capacity. Always center the load on platform and as close to truck as possible.

10. Always disconnect the negative (-) battery cable terminal when welding on liftgate or truck.

LIFTGATE SPECIFICATIONS

CAPACITY	1600 LB
DRIVE SYSTEM	DUAL HYD CYLINDERS
PLATFORM AREA	87 X 33 (WITH 6-IN TARPER)
PLATFORM MAT'L	GRIPSTRUT W/ RHINO COATING



LIFTGATE FUNCTIONS & COMPONENT IDENTIFICATION

Your liftgate is powered via your vehicle battery. The vehicle battery powers a moto coupled to a hydraulic pump. Flow from the pump retracts two cylinders attached to the upper arm assembly that lifts the gate platform. A check valve blocks return flow from the cylinders to the pump and a pressure relief valve prevents the gate from being overloaded.

WARNING!

Do not use liftgate as a scale. The liftgate may lift more than its rated capacity. Be aware of how much is being lifted and never exceed the rated capacity of the liftgate. Be aware of how much is being hauled and never exceed the rated capacity of the vehicle.

The gate platform is lowered by gravity after an electric "release" valve is activated and opened at the pump.

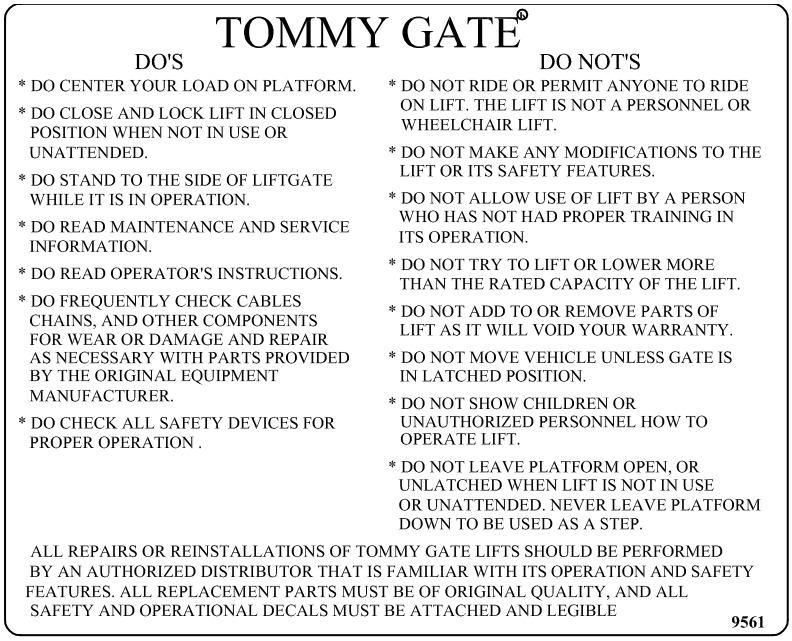
The electric toggle switch control incorporates a low voltage warning feature. This low voltage feature keeps the raise solenoid from chattering and prevents welding of the solenoid contacts.

If a low voltage condition occurs, the amber "POWER ON" LED will blink and the gate controls will be inoperable. In order to operate the gate, you must correct the low voltage condition and reset the control. To reset the control, depress the "POWER ON" hidden switch twice, once to shut down power and once to turn power on.

The low voltage condition may be caused by a weak bettery, loose or corroded connections, improper ground, or bad electrical cables. This condition may be corrected by just starting the vehicle or replacing the battery.

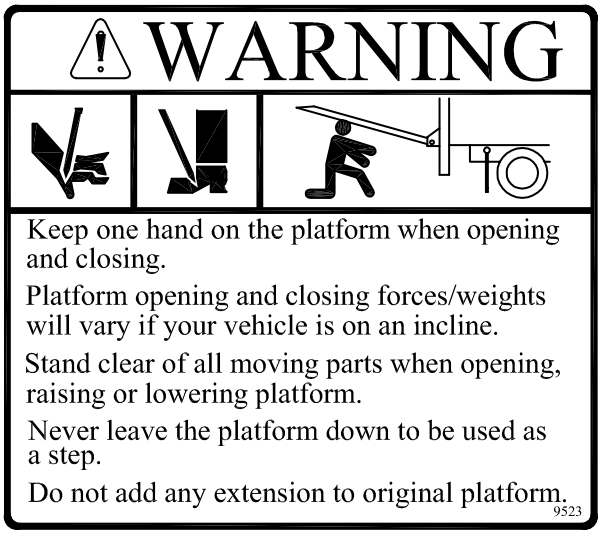
SAFETY DECALS & LOCATIONS

Locate and read all decals prior to operating liftgate. Replace decals if missing or illegible.



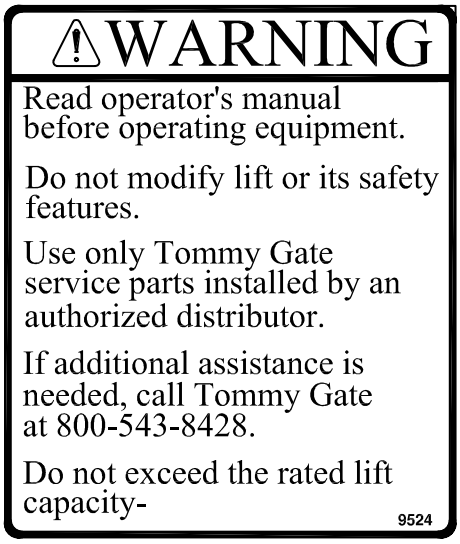
Decal No. 1

Place in cab in a highly visible area.



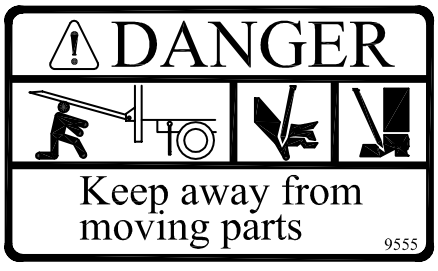
Decal No. 2

Located on the outside right-hand corner of the platform.



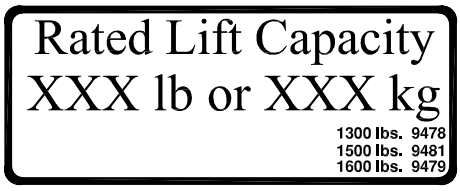
Decal No. 3

Located on the front of the control shield (40 inch travel lift)
Located next to the control shield (50 inch travel lift).



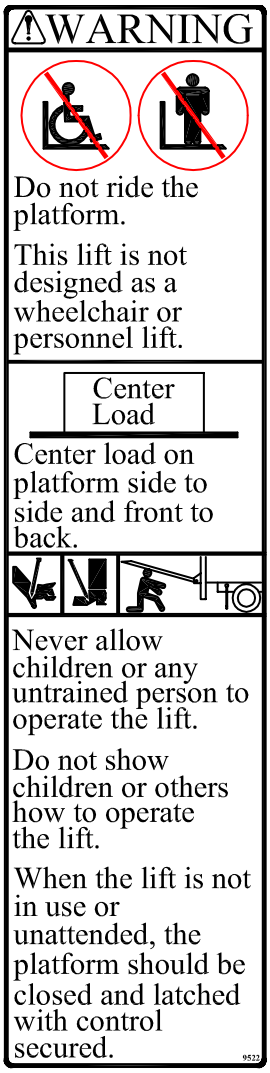
Decal No. 4

Located on the side of uprights

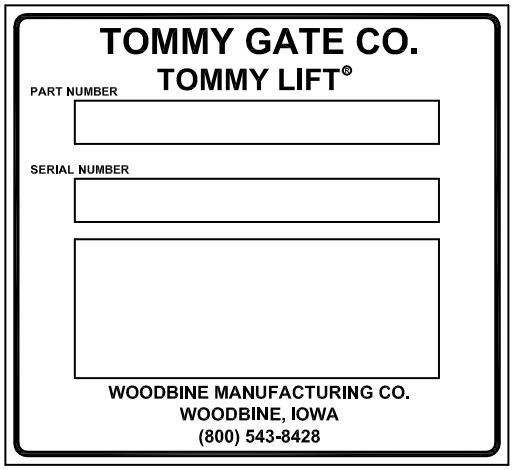


Decal No. 5

Located on the front of the control shield (40 inch travel lift).
Located next to the control shield (50 inch travel lift).

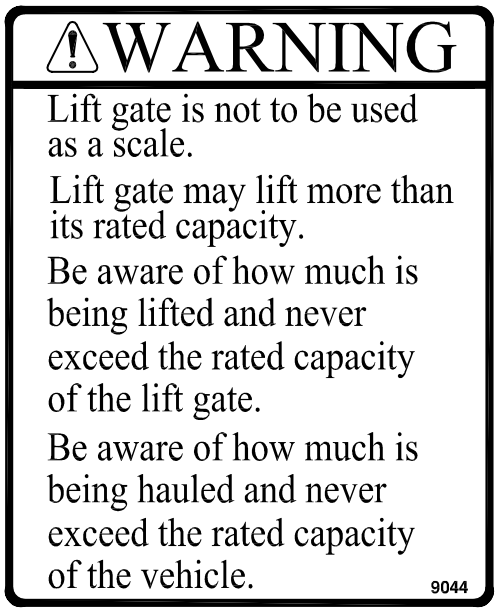


Decal No. 6
Located on left-hand upright inside the frame.
(Or on right hand side of lift and dump models.)



Decal No. 7
Located on the inside of the main frame,
positioned over the top of the pump & motor unit.
Located next to the control shield.

Decal No. 8
Located on the upright next to
the torsion spring and safety holder
on models with torsion assist spring.



Decal No. 10
Located next to the control shield.

Decal No. 9
Located on box cover of gate.

LIFTGATE OPERATION

1) To open the platform, go to the driver's side of the liftgate , push the latch to the side, off the platform pin, and rotate the latch down. Move to the passenger's side of the liftgate and remove the latch padlock. With one hand, push the passenger's side latch to the side, off the platform pin, while holding the top of the platform with your other hand. Pull the platform open and step away from the platform as it opens.

2) If the gate is on an application with swing-ouot doors, open them at this time.

3) Stand clear of the platform and all moving parts when using the lift.

To turn the control power on, press the POWER ON hidden switch once, marked with black rings or circles (located between the liftgate ID and the toggle switch). You should see the amber LED POWER ON light when the control is armed. To disarm the control, press the POWER ON hidden switch again.

To activate the control, press the LIFTGATE ACTIVATED hidden switch twice within one second (located under the liftgate logo). You should see the red "LIFTGATE ACTIVATED light when the control is activated.

To lower the platform, push the toggle switch down. To raise the platform, push the toggle switch up. When you remove pressure from the toggle switch, the operation will stop.

After you have activated the control by pressing the LIFTGATE ACTIVATED hidden switch twice within one second, you have approximately 90 seconds to use the gate. If the gate isn't used before the 90 seconds is up, the LIFTGATE ACTIVATED time deactivates the control. If the gate is used within 90 seconds, the LIFTGATE ACTIVATED timer automatically resets for an additional 90 seconds. To reactivate the timer, press the LIFTGATE ACTIVATED hidden button twice within one second.

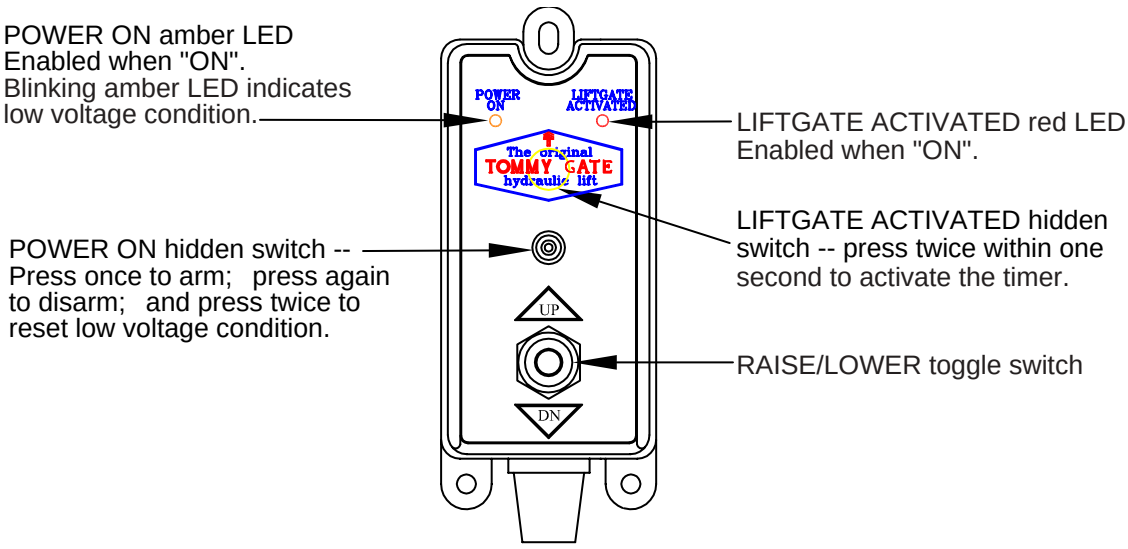
4) After the platofrm is raised to the level of the vehicle's floor and the load is removed, close the platform and folding extension (if equipped). The latch on the passenger's side will secure itself. Install the latch padlock on the passenger's side latch. Go to the driver's side and secure the latch.

5) NEVER LEAVE THE TRUCK WITH THE PLATFORM ON THE GROUND, PARTIALLY RAISED, OR OPEN. To prevent children or unauthorized personnel from operating the lift, keep the gate in the stored position when not in use, and secure both the driver's and passenger's side latches. Make sure the passenger's side latch padlock is installed and the control is deactivated before leaving the truck unattended.

6) The liftgate is an industrial product for material handling only. It is not to be used as a personnel or wheelchair lift. Do not ride on the platform. Always stand clear of the platform when opening, raising, or lowering.

7) NEVER ALLOW UNAUTHORIZED PERSONNEL TO OPERATE THE LIFTGATE.

8) Deactivate the controls and make sure the passenger's side latch padlock is installed when the liftgate is not in use.



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LIFTGATE ADJUSTMENT

1) Make sure liftgate is in the fully raised position.

2) Disconnect the #4 power cable from the positive side of the battery or manually trip the circuit breaker. Remove the latch padlock from the passenger's side of the platform.

3) Unlatch the driver's side latch and then the passenger's side latch. Unfold the liftgate platform.

4) Remove the Phillips head screw(s) that hold the upright caps in place, then remove both upright caps (Figures 1 & 2).

5) Check the spring tension on the driver's side and passenger's side latch springs as shown (Figures 4 & 5). The driver's side swing away latch spring should measure 1" tall. Tighten or loosen if necessary. The passenger's side fixed latch spring should measure 7/8" tall. Tighten or loosen if necessary.

6) Loosen the platform latch pin with a 9/16" wrench and a screwdriver. The hole in the platform is oversized to allow the platform latch pin to be adjusted. See Figure 3.

7) Close and latch the platform.

8) Center the platform latch pin vertically in the latch hole. Push the platform latch pin toward the front of the truck so there is a 1/8" gap (Figures 6 & 7). Tighten the platform latch pin with a 9/16" wrench and a screwdriver to 20 ft-lb.

9) Reinstall the upright caps on the uprights.

10) Reconnect the liftgate's main power cable to the positive side of the battery.

11) Install the latch padlock on the passenger's side of the platform.

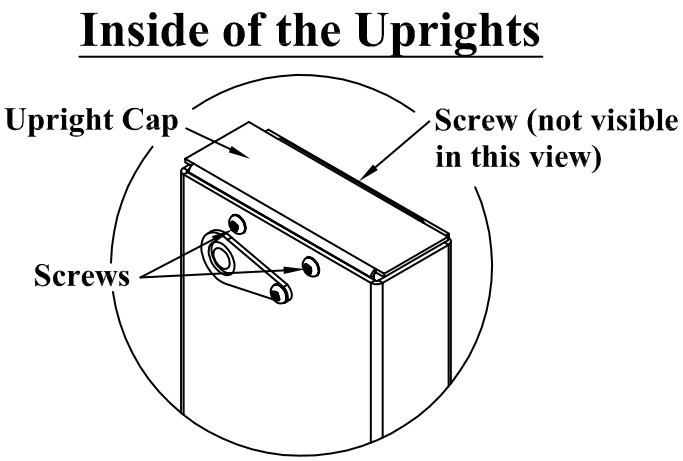


Figure 1. Three screws per upright for the **40 inch travel lift**.

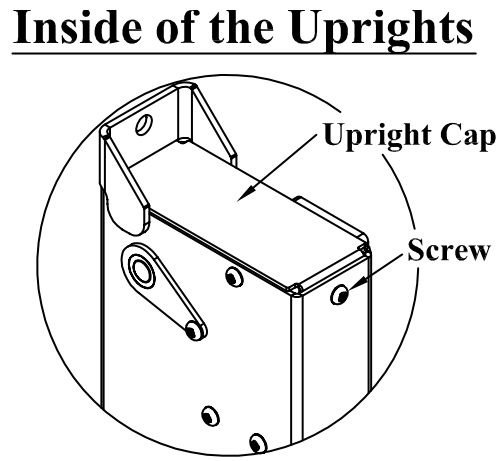


Figure 2. One screw per upright for the **50 inch travel lift**.

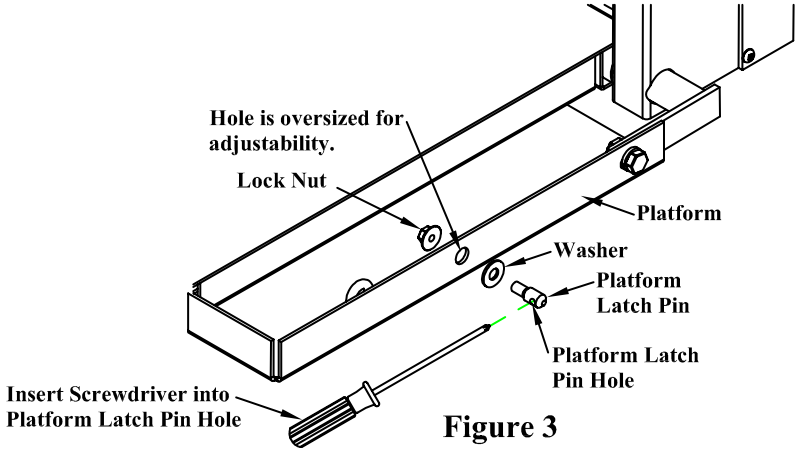


Figure 3

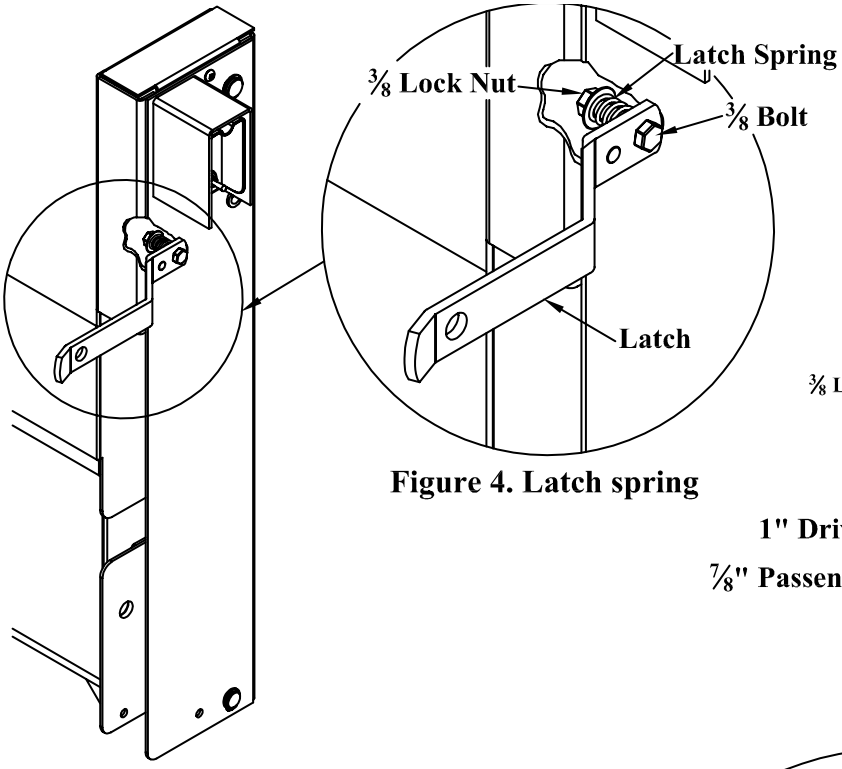


Figure 4. Latch spring

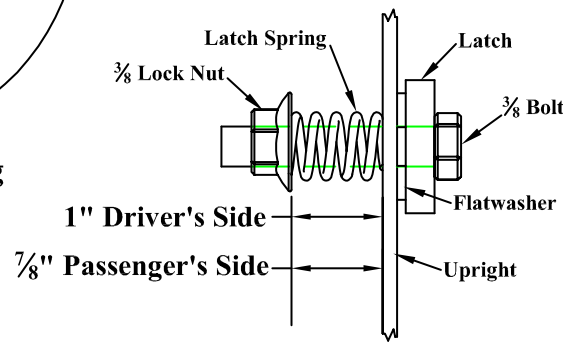


Figure 5. Latch spring

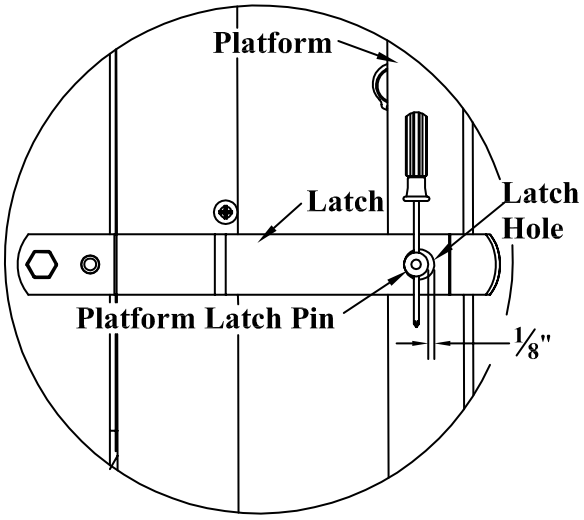


Figure 6. Latch pin adjustment **40 inch travel lift**.

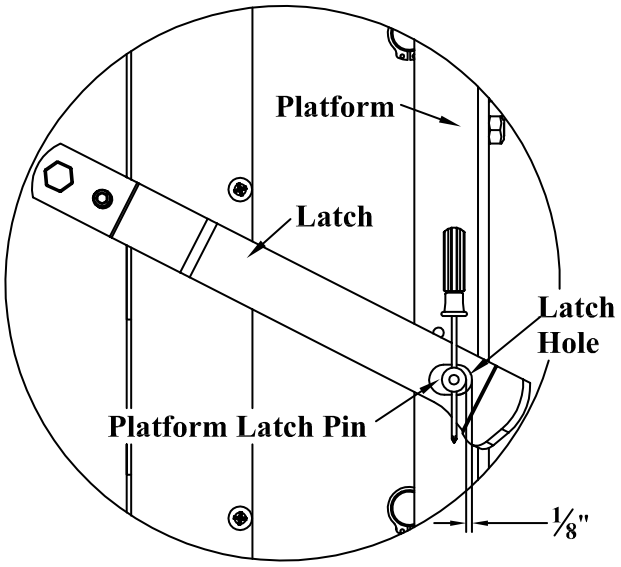


Figure 7. Latch pin adjustment **50 inch travel lift**.

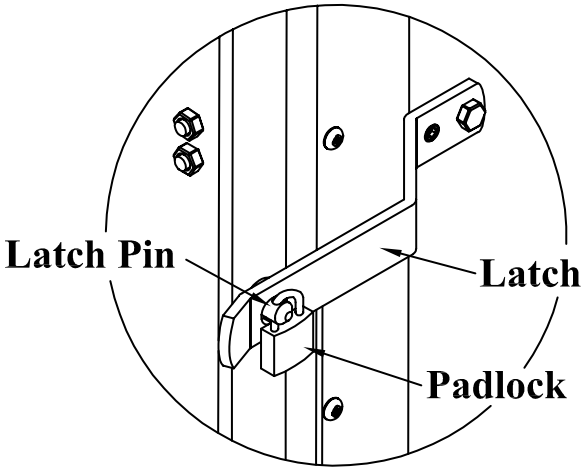


Figure 8. Latch padlock

PLATFORM DROP-AWAY FEATURE

Install platform drop-away pin (Figure 1).

1) Insert the platform drop-away pin through the existing 3/8” hole in the upright back.

2) Fasten the pin to the upright using the supplied 3/8” nut.

Prepare chain for platform drop-away feature (Figure 2).

1) Unhook both platform chains from the subassembly pins.

CAUTION!

Platform may spring back with great force if released under pressure.

2) Push the platform down and pull the driver’s side chain toward the drop-away pin on the upright.

3) Mark the position of the cloth cover that is next tothe drop-away pin.

4) Slowly release the platform allowing the spring tension to lessen.

5) Cut a 1” slit in the cloth cover.

Use platform drop-away feature (Figure 3).

1) Unhook both platform chains from the sub-assembly pins.

2) Pull chain link through slit cut in driver’s side chain cover.

CAUTION!

Platform may spring back with great force if released under pressure.

3) Push the platform down and hook exposed link over drop away pin on the upright.

CAUTION!

If equipped, the platform flipper may fall open and contact the ground if the ball locks on the platform are not in good working order.

Disable platform drop-away feature

1) Reverse order of above instructions.

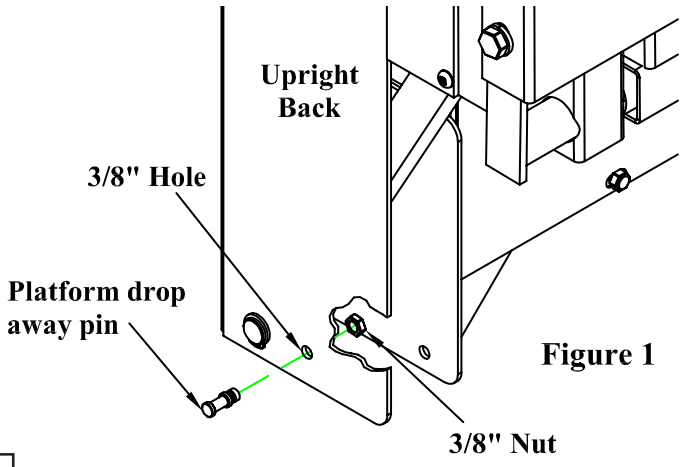


Figure 1

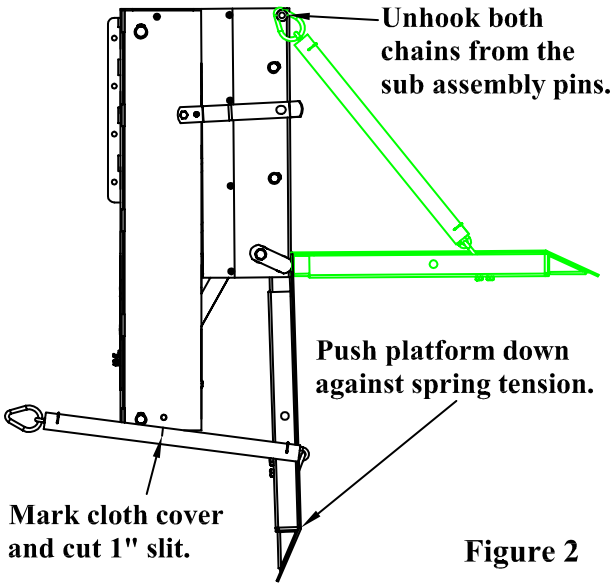


Figure 2

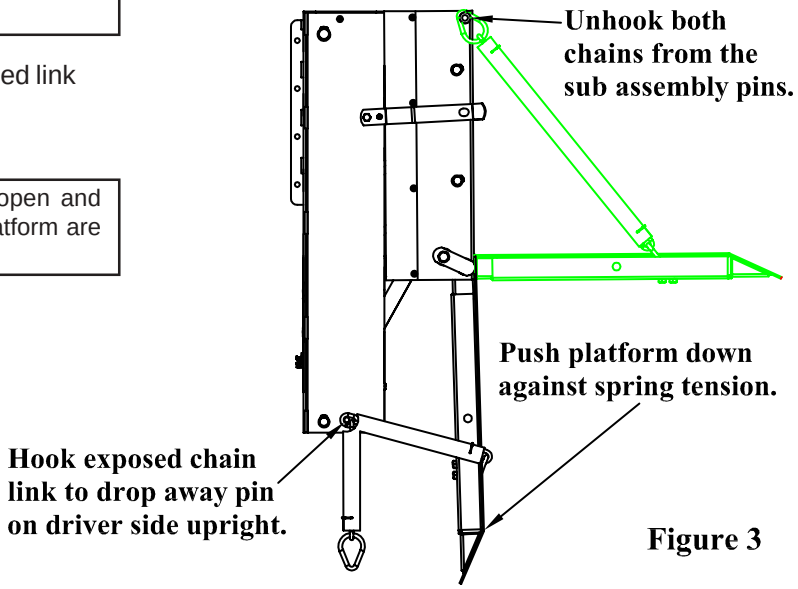


Figure 3

WIRING DIAGRAM

IMPORTANT

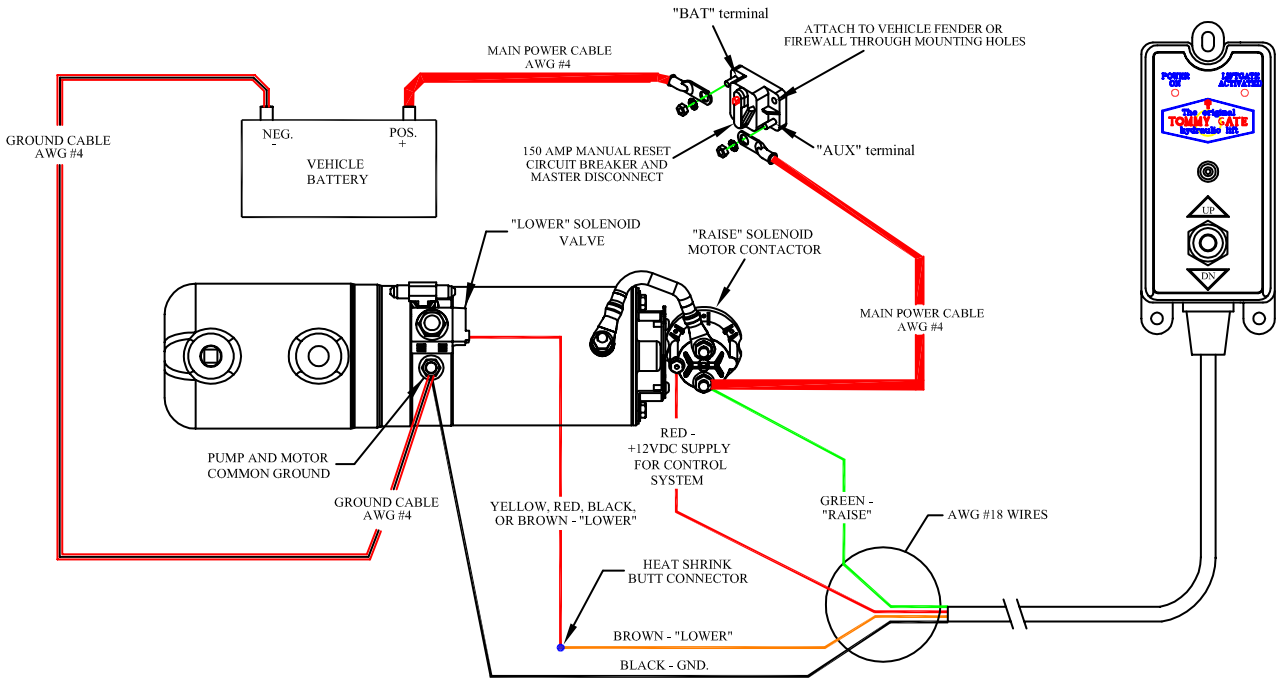
WELDING NOTE !!! DISCONNECT ALL BATTERY CABLES. ALWAYS DISCONNECT THE GROUND CABLE FIRST. ATTACH THE WELDING GROUND TO THE TRUCK RATHER THAN THE LIFTGATE.

IMPORTANT

!!! PLEASE READ AND FOLLOW ALL DIRECTIONS BEFORE PROCEEDING !!!

IMPORTANT

NOTE !!! IF GATES ARE NOT WIRED IN ACCORDANCE WITH THIS DIAGRAM YOUR WARRANTY WILL BE VOID.



MAINTENANCE

A) Inspect platform chains for any wear. Replace immediately if either is found to be worn.

B) Check the oil level in the reservoir. With the liftgate platform at the bottom of its travel, the fluid should be two-thirds full. BE SURE THE CYLINDERS ARE COMPLETELY EXTENDED.

CAUTION!

Use ISO Grade 32 hydraulic oil only. Using any other oil will void cylinder warranty.

C) Check for leaks from the cylinder, hoses, adn all fittings. Replace or repair if leaky.

D) Grease all zerk fittings with an ample amount of grease (every 120 days). Do not grease composite bushings.

E) Replace any worn or missing parts before putting the liftgate back into service.

F) If needed, adjust platform latches which are designed to hold the liftgate in a properly stored position.

G) Check for cracks in all welds (repair if needed).

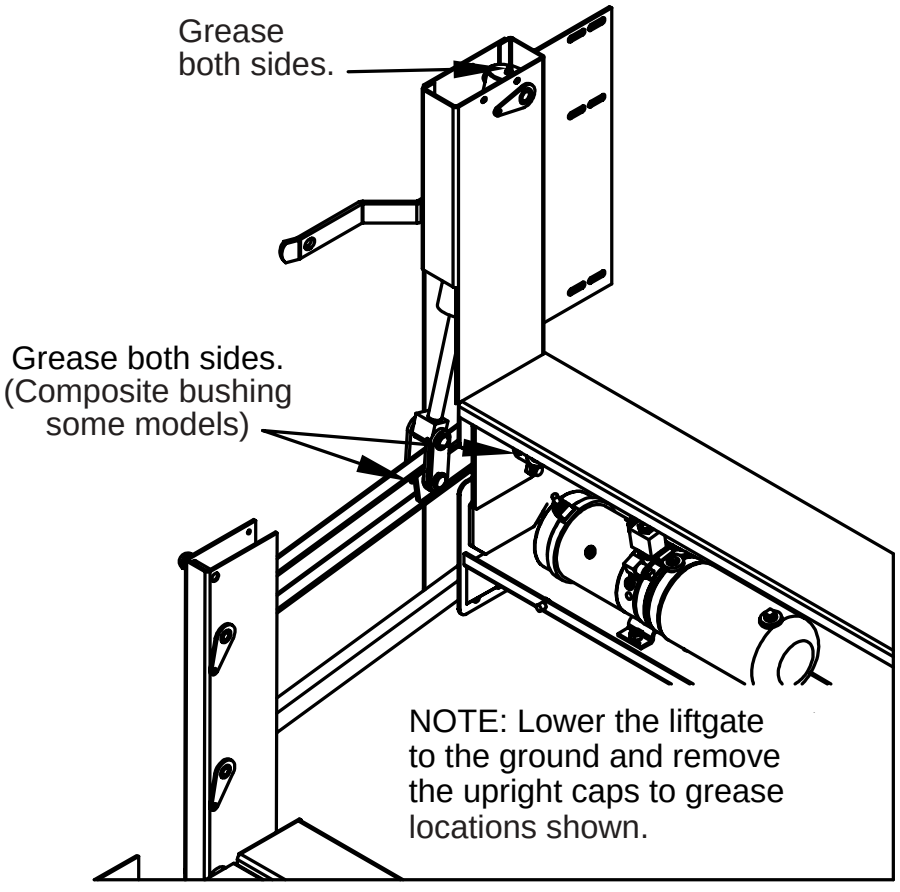
H) Check for wear at all pivot points.

I) Check all electrical connections. Clean or repair if needed.

J) Replace fuses if needed. Check electric cables for worn or damaged insulation.

K) Replace or clean safety decals, so they are legible.

L) Check control for proper operation.



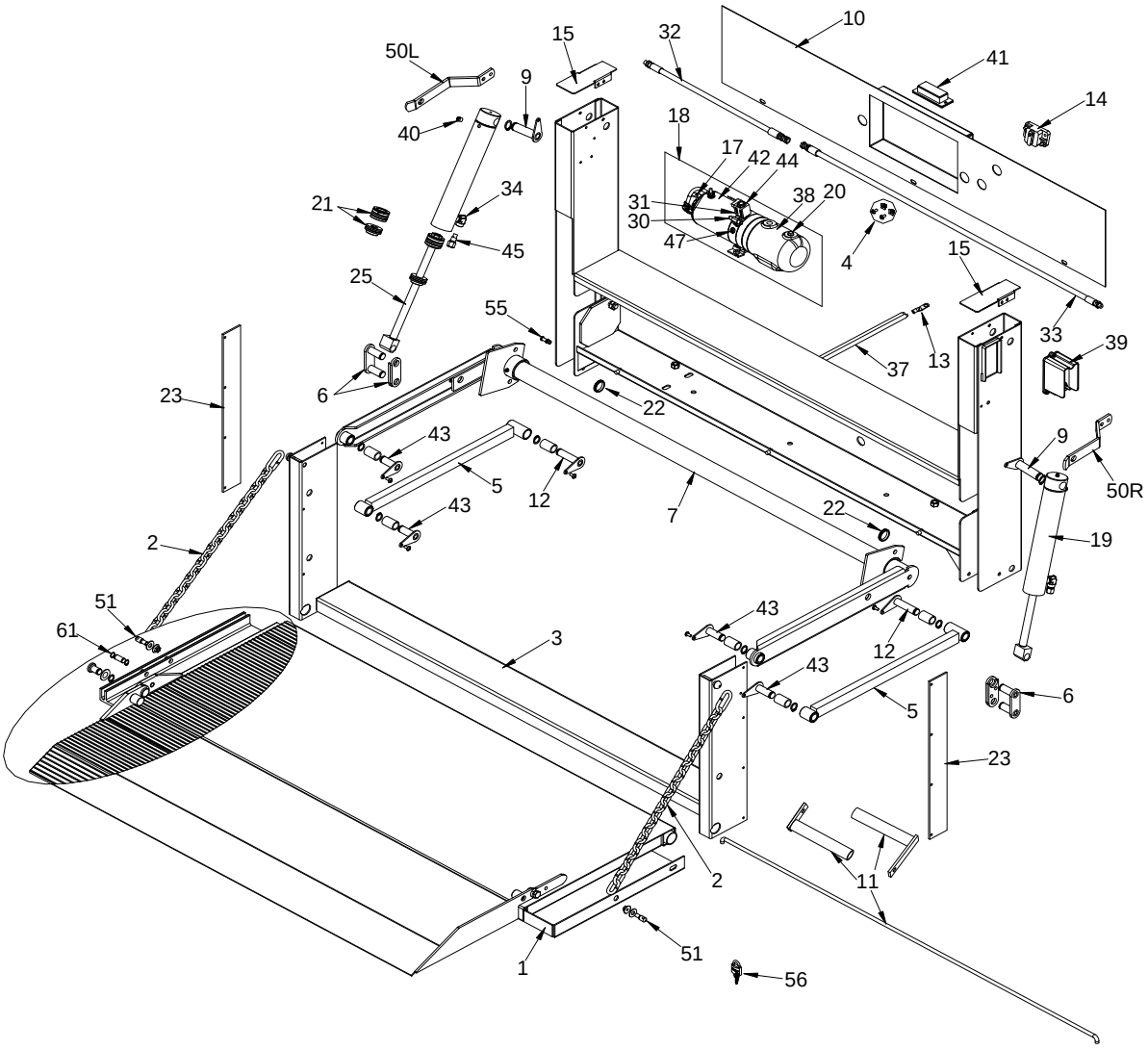
TROUBLESHOOTING

	Problem	Possible Cause	Remedies
1	Lift will not operate-"POWER ON" amber LED light does not come on.	Control not armed properly.	Turn the power on at the control by pressing the "POWER ON" hidden switch, marked with black rings or circles (located between the Tommy Gate logo and the toggle switch).
		Poor electrical connection.	Check and repair or replace all cables and connections.
		3 Amp Mini ATO fuse is blown.	Correct short and then replace fuse.
		Polarity is reversed.	Switch positive and negative cables.
		Circuit breaker tripped or disengaged.	Check for short, then manually engage circuit breaker.
		Faulty control.	Replace control.
2	Lift will not operate-"LIFTGATE ACTIVATED" red LED light does not come on.	POWER ON amber LED light is blinking	Low voltage condition. Check and repair or replace all cables and connections.
		Control not activated properly.	Press the "LIFTGATE ACTIVATED" hidden switch twice within one second (located under the Tommy Gate logo). The red "LIFTGATE ACTIVATED" LED light should come on.
		Faulty control.	Replace control.
3	Blinking amber "POWER ON" LED.	Low voltage condition.	Check and clean or repair all electrical connections. Load test battery, then recharge or replace battery, if required. Reset control.
		Poor grounds or connections.	Repair, replace, clean as necessary.
		Power connected or reconnected since last use.	Normal, press bullseye once to activate solid "POWER ON" red LED.
4	Lift will not raise or raises slowly - control working properly.	Poor electrical connection.	Check power and ground cables and all connections.
		Battery charge is low.	Recharge or replace battery.
		Release valve stuck, partially open or dirty.	Raise platform completely and continue to run pump for 5 seconds.
		Release valve needs replacement.	Contact IMT.
		Raise solenoid not working.	Contact IMT.
		Oil level low.	Check oil and add ISO grade 32 hydraulic oil ONLY.
		Vent plug not installed or dirty.	Check vent plug on pump tank. A red shipping plug is installed at the factory. It must be replaced by the metal vented plug.
		Overloaded liftgate.	Remove some material or weight.
5	Lift settles down slowly with load or no load.	Hoses or fittings leaking.	Tighten or replace.
		Check valve stuck or dirty.	Lift and lower lift several times to flush out valve.
		Check valve damaged.	Contact IMT
		Cylinder seals worn or damaged.	Contact IMT
		Down solenoid sticking partially open.	Contact IMT
6	Pump or motor noisy.	Worn pump, motor or coupling.	Contact IMT
		Oil level low.	Check oil and add ISO grade 32 hydraulic oil ONLY.
7	Lift lowers very slowly, especially in cold weather.	Hinge arm pins seized to the bushings.	Clean and/or replace arm pins and bushings.
		Lack of lubrication at cylinder pins and/or upper arm assembly.	Lubricate all zerks.
		Cylinder pins seized due to lack of lubricant.	Clean and/or replace cylinder pins.

TROUBLESHOOTING

	Problem	Possible Cause	Remedies
8	Lift will not lower.	Control not armed and activated-No amber "POWER ON" LED or red LIFTGATE ACTIVATED LED light on.	Press the "POWER ON" hidden switch, marked with black rings or circles (located between the Tommy Gate logo and the toggle switch). The amber "POWER ON" LED light should come on. Now press the hidden "LIFTGATE ACTIVATED" switch twice within one second (located under the Tommy Gate logo). The red "LIFTGATE ACTIVATED" LED light should come on.
		Poor electrical connections.	Check and clean or repair all electrical connections.
		3 Amp Mini - ATO fuse is blown.	Correct short and then replace fuse.
		Lift stuck or sprung, if control is working properly.	Apply downward load on platform, pry away upright sides
		If control is working properly, damaged or non-working release solenoid.	Contact IMT
		Hinge arm or cylinder pins seized.	Lubricate, clean and/or replace pins.

LIFTGATE REPLACEMENT PARTS (70734521 / 70734522)



70734521 / 70734522 PARTS LIST

	PART #	DESCRIPTION	QTY
1.		PLATFORM	1
2.	73050196	PLATFORM CHAIN	2
3.		SUB ASSEMBLY	1
4.		LICENSE PLATE MOUNT KIT	1
5.	71414334	LOWER ARM W/PINS & BUSHINGS	2
6.	51723701	CLEVIS CYLINDER ASSEMBLY	2
7.		UPPER ARM ASSEMBLY	1
9.	71414335	7/8" UPRIGHT BACK CYLINDER PIN	2
10.	70734737	LIGHT PANEL ONLY	1
	70734738	LIGHT PANEL W/LIGHTS	
11.	70734572	TORSION SPRING KIT	1
12.	71414336	3/4" UPRIGHT BACK ARM PIN & BUSHING	2
13.		COPPER LUG	6
14.	77441219	FUSE (225 AMP) (FUSE HOLDER 77441116)	1
15.		UPRIGHT CAP	2
17.	77041880	RAISE SOLENOID-3 POST	1
18.	77041881	PUMP & MOTOR UNIT(2500PSI)	1
19.	51723702	CYLINDER	2
20.	72534782	VENT PLUG	1
21.	73050197	CYLINDER REPAIR KIT	2
22.		SPLIT PLASTIC GROMMET KIT	2
23.		SUB ASSEMBLY BELTING	2
25.		CYLINDER SHAFT COMPLETE	2
30.	73540438	MONARCH LEE CHECK VALV	1
31.		T FITTING (PUMP & MOTOR)	1
32.		1/4"X26-1/4" HYDRAULIC HOSE-LEFT	1
33.		1/4"X85-3/4" HYDRAULIC HOSE-RIGHT	1
34.		1/4"X1/4"X90DEG STL CYL ELBOW	1
37.		4 GA. 2 WIRE ELEC CABLE W/LUGS (33 FT)	1
38.	70734573	3QT MONARCH PLASTIC TANK	1
39.	77041882	FIXED CONTROL	1
40.	72534783	VENT PLUG - CYLINDER	2
41.		LICENSE PLATE LIGHT & BRACKET	1
42.	77041883	12 VOLT MOTOR-ONLY	1
43.	71414337	3/4" UPRIGHT FRONT ARM PIN	4
44.	77041884	RELEASE SOLENOID EXTERNAL ASSEMBLY W/CONN	1
45.	73540439	FLOW CONTROL	2
47.	51723703	PUMP (ONLY) W/3QT. TANK (2500PSI)	1
50L.	51723704	LATCH KIT-LEFT	1
50R.	51723705	LATCH KIT-RIGHT	1
51.	51723706	PLATFORM LATCH PIN ASSEMBLY	2
55.		DROP AWAY PIN ASSEMBLY	1
56.		PADLOCK W/KEYS	1
61.	71414338	PLATFORM CHAIN PIN(1.079")	2

RELEASED FALL 2010

SECTION 6: CALCIUM CHLORIDE SYSTEM

CACL2 SYSTEM-400 GAL (41715803-1) (THRU 6/2000) 3
CACL2 SYSTEM-400 GAL (41715803-2) (THRU 6/2000) 4
CACL2 SYSTEM-400 GAL (41715803-1) (6/2000 ON) 5
CACL2 SYSTEM-400 GAL (41715803-2) (6/2000 ON) 6
FLR-1/2 HOSE REEL W/CACL2 (51716138) 7
SHELF PACKAGE - PREDATOR CALCIUM CHLORIDE SYSTEM (51715868) 8
DECAL KIT-CACL2 SYSTEM (51715949) 9

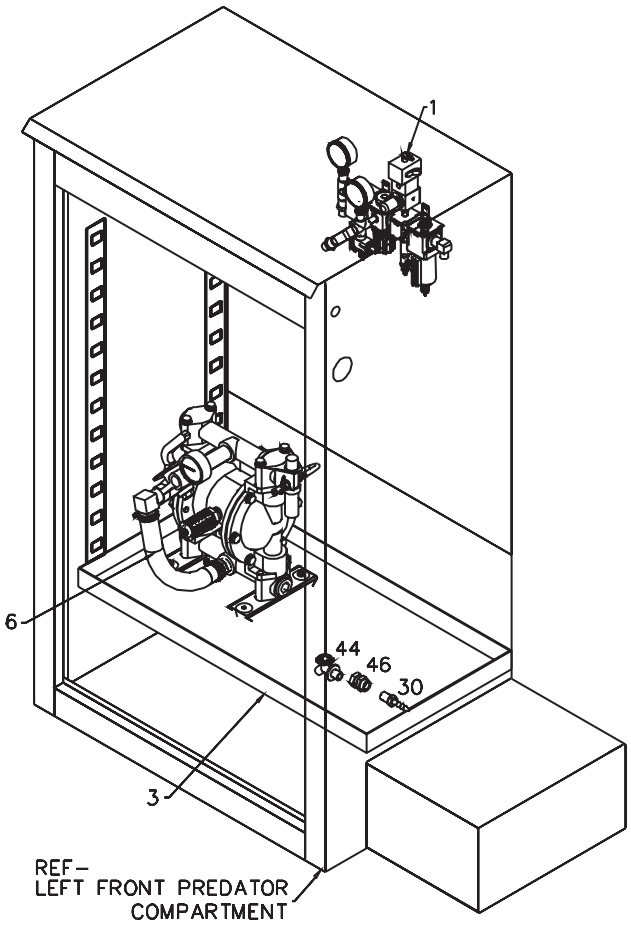
NOTES

$CaCl_2$ SYSTEM-400 GAL (41715803-1) (THRU 6/2000)

1.	51716138	FRL	1
2.	51716032	KIT-HDWR SHELF MTG	1
3.	60250745	SHELF	1
4.	51701520	HOSE ASM 18' W/FTGS	1
5.	51701525	MIXER ASM	1
6.	51714060	TIRE PUMPER	1
7.	51715949	DECAL KIT	1
8.	51715951	KIT-HDWR (INCL:60-78)	1
9.	51716140	KIT-FTGS (INCL:25-56)	1
10.	52707368	MTG BRKT	1
11.	60106492	BRACKET	1
12.	60250743	BRACKET-GAUGE	1
13.	60250744	BACK-CALC TANK	1
14.	70034457	TANK-400GAL CALC	1
15.	70034458	SCREEN-STRAINER	1
16.	70073107	TANK-15GAL	1
17.	79085286	EJECTOR	1
18.	89039176	HOSE-AIR 1/2X250#	6FT
19.	89039188	HOSE-AIR 1X2 300#	6'
20.	89392146	HOSE 1/4X250#	8'
24.	72532279	ELBOW 1 - .5	1REF
25.	60113842	ADAPTER-MODIFIED	1REF
26.	72053198	PIPE NIPPLE 1NPT X CLOSE	1REF
28.	72053403	PIPE PLUG 3/8NPT SH	2REF
29.	72053405	PIPE PLUG 3/4NPT SH	2REF
30.	72053457	BARB NIPPLE 1/2NPT 1/2HOSE	3REF
31.	72053523	STREET ELBOW 1/4NPT 90°	2REF
32.	72053555	TEE 3/4NPT	1REF
33.	72053556	STREET ELBOW 3/4NPT 90°	1REF
34.	72053726	ADAPTER 3/3MPT 1/2MPT HEX	1REF
35.	72066000	HOSE CLAMP 1/2-1.25 SAE12	3REF
36.	72531132	STREET ELBOW 3/8NPT 90°	1REF
37.	72531133	STREET ELBOW 1/2NPT 90°	1REF
38.	72532470	BARB NIPPLE 1MPT 1HOSE	4REF
39.	72532552	HOSE FTG-TYPE O 1/4 1/4 BRS	6REF
40.	72532718	NUT 1 LOCK BRS	2REF
41.	72532719	PIPE NIPPLE 1NPT X 2-1/2 BRS	1REF
42.	72532721	BULKHD COUPLING 1/4 X 1-1/2	2REF
43.	72533022	PIPE NIPPLE 1/2NPT X CLOSE	2REF
44.	72533121	SILLCOCK 1/2	1REF
45.	72533124	REDUCER BUSHING 2 - 1.25	1REF
46.	72533140	BULKHD COUPLING 1/2 X 1-1/2	1REF
47.	72533569	HOSE FTG-TYPE O 1/4 3/8 BRS	1REF
48.	72533646	STREET ELBOW 1NPT 90°	2REF
49.	72533647	COUPLING 1NPT BRS	1REF
50.	73054001	GATE VALVE 1NPT BRS	1REF
51.	73054192	BALL VALVE 1/2NPT	1REF
52.	73054130	GATE VALVE 1-1/4NPT BRS	1REF
53.	73054676	CHECK VALVE 1/2FPT INLINE	1REF
54.	73054296	POP OFF VALVE 60PSI	1REF
55.	72066061	HOSE CLAMP 3/8-7/8 SAE 6	2REF
56.	72066065	HOSE CLAMP 3/4-1.75 SAE20	4REF
60.	72060025	CAP SCR 5/16-18X1 HHGR5	2REF
61.	72060027	CAP SCR 5/16-18X1-1/2 HHGR5	4REF
62.	72060046	CAP SCR 3/8-16X1 HHGR5	8REF
63.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	2REF
64.	72060048	CAP SCR 3/8-16X1-1/2 HHGR5	4REF
65.	72060833	SCR 5/16-18X3/4 THRDCTG HWH	6REF
66.	72060989	CARR BOLT 5/16-18X1 RBNK GR2	1REF
67.	72062001	NUT 5/16-18 HEX	6REF
68.	72062103	NUT 3/8-16 LOCK	14REF

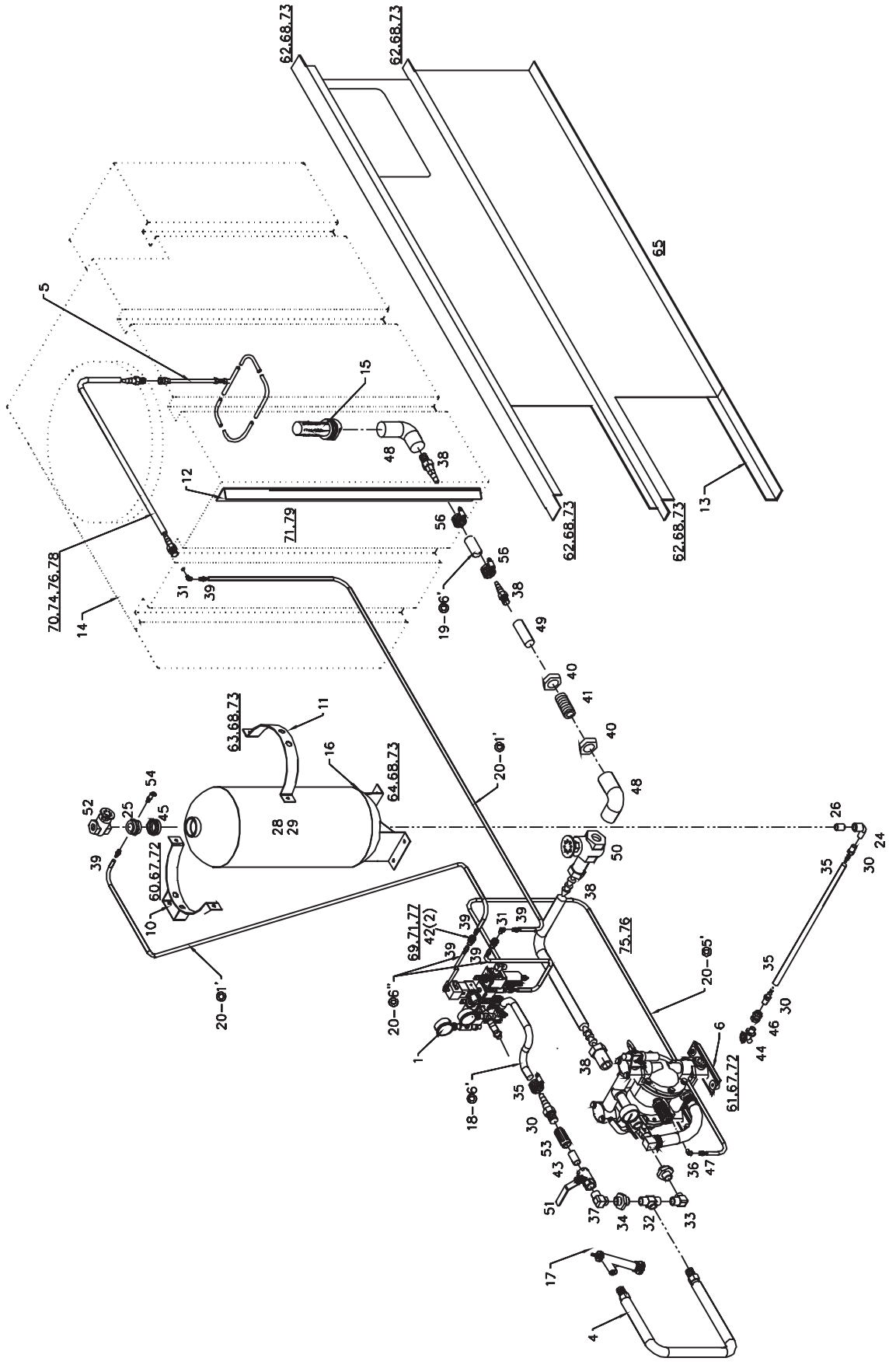
CONTINUED ON NEXT PAGE

69.	72062104	NUT 1/4-20 LOCK	4REF
70.	72062104	NUT 1/4-20 LOCK SS	1REF
71.	72063001	WASHER 1/4 WRT	8REF
72.	72063002	WASHER 5/16 WRT	12REF
73.	72063003	WASHER 3/8 WRT	28REF
74.	72063183	WASHER 1/4 SS	1REF
75.	72066349	POP RIVET .19 X 1/2GRIP	1REF
76.	72066525	HOSE CLAMP 3/4 VINYL CVR	3REF
77.	72061164	CARR BOLT 1/4-20X1-1/4 SQNK	4REF
78.	72601593	CAP SCR 1/4-20X1-1/2 FLTHD SS	1REF
79.	72060021	CAP SCR 1/4-20X1/2 HH SS	1REF



SERIAL NUMBER PRED991001 THROUGH 6/2000

$CaCl_2$ SYSTEM-400 GAL (41715803-2)(THRU 6/2000)



SERIAL NUMBER PRED991001 THROUGH 6/2000

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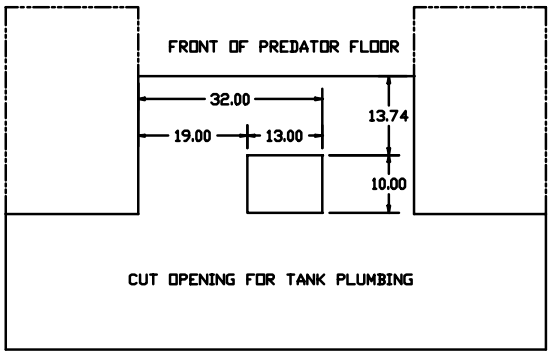
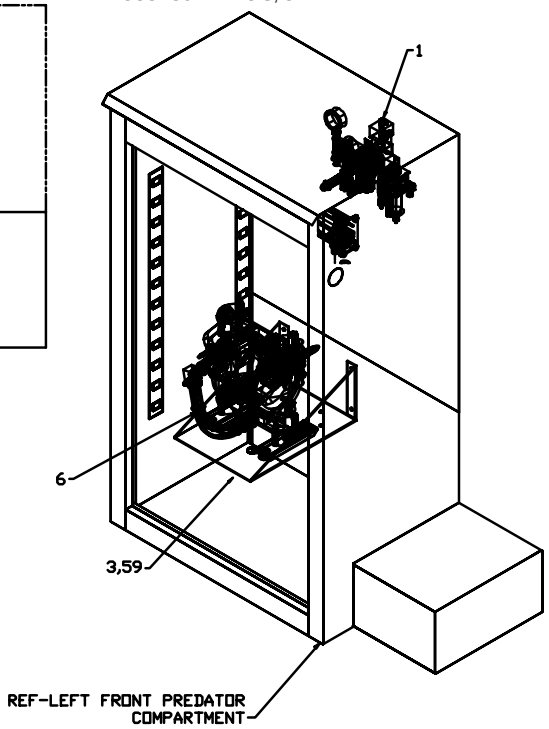
$CaCl_2$ SYSTEM-400 GAL (41715803-1) (6/2000 ON)

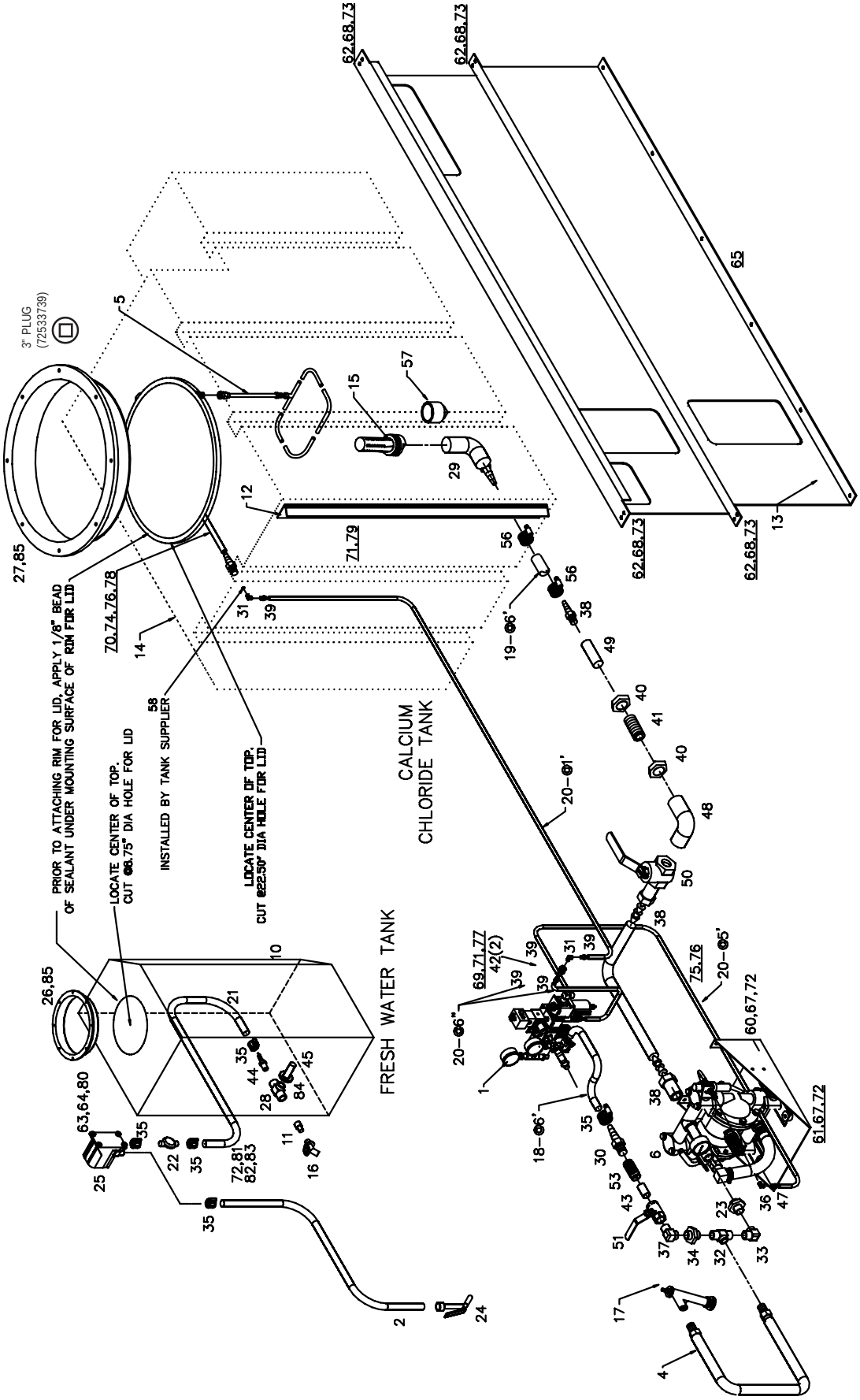
1.	51716138	FRL	1
2.	70396040	HOSE 3/4" FRESH WATER	1
3.	60250816	SHELF	1
4.	51701520	HOSE ASM 18' W/FTGS	1
5.	51701525	MIXER ASM	1
6.	51714060	TIRE PUMPER	1
7.	51715949	DECAL KIT	1
8.	51715951	KIT-HDWR (INCL:60-84)	1
9.	51716140	KIT-FTGS (INCL:26-56)	1
10.	70034461	WATER TANK 45 GAL	1
11.	72053558	ADPT 3/4 MPT 3/4 MPT HEX	1
12.	60250743	BRACKET-GAUGE	1
13.	60250744	BACK-CALC TANK	1
14.	70034457	TANK-400GAL CALC	1
15.	70034458	SCREEN-STRAINER	1
16.	72533121	SILLCOCK 1/2 THRD	1
17.	79085286	EJECTOR	1
18.	89039176	HOSE-AIR 1/2X250#	6FT
19.	89039188	HOSE-AIR 1X2 300#	6FT
20.	89392146	HOSE 1/4X250#	8FT
21.	89392349	HOSE 3/4X250# WP	5FT
22.	70146348	STRAINTER 3/4 BARB	1
23.	72531821	BUSHING - REDUCER BRASS 1-3/4	1
24.	72533725	NOZZLE FRESH WATER	1
25.	73051990	PUMP	1
26.	70395940	LID ASM - 8" ACCESS COVER	1
27.	70395714	LID-ASM - CHLORIDE 22" ROUND	1
28.	72533722	TEE NYLON 3/4	1REF
29.	70034462	ELL PIPE 90° 1.0" NPT BARB NYLON	1REF
30.	72053457	BARB NIPPLE 1/2NPT 1/2HOSE	1REF
31.	72053523	STREET ELBOW 1/4NPT 90°	2REF
32.	72053555	TEE 3/4NPT	1REF
33.	72053556	STREET ELBOW 3/4NPT 90°	2REF
34.	72053726	ADAPTER 3/3MPT 1/2MPT HEX	2REF
35.	72661657	CLAMP-HOSE .75 STEPLESS EAR (WAS 72066000)	6REF
36.	72531132	STREET ELBOW 3/8NPT 90°	1REF
37.	72531133	STREET ELBOW 1/2NPT 90°	1REF
38.	72532470	BARB NIPPLE 1MPT 1HOSE	2REF
39.	72532552	HOSE FTG-TYPE O 1/4 1/4 BRS	4REF
40.	72532718	NUT 1 LOCK BRS	2REF
41.	72532719	PIPE NIPPLE 1NPT X 2-1/2 BRS	1REF
42.	72532721	BULKHD COUPLING 1/4 X 1-1/2	1REF
43.	72533022	PIPE NIPPLE 1/2NPT X CLOSE	2REF
44.	72533721	NIPPLE BARB NYL 3/4 MPT 3/4	1REF
45.	72531554	NIPPLE PIPE BRS 3/4 X 2.00	1REF
47.	72533569	HOSE FTG-TYPE O 1/4 3/8 BRS	1REF
48.	72533646	STREET ELBOW 1NPT 90°	1REF
49.	72533647	COUPLING 1NPT BRS	1REF
50.	73540081	BALL VALVE 1NPT BRS	1REF
51.	73054192	BALL VALVE 1/2NPT	1REF
53.	73054676	CHECK VALVE 1/2FPT INLINE	1REF
55.	72066061	HOSE CLAMP 3/8-7/8 SAE 6	2REF
56.	72066065	HOSE CLAMP 3/4-1.75 SAE20	4REF
59.	89392440	WEATHERSTRIP .06X.56 TRIM	4FT
60.	72060025	CAP SCR 5/16-18X1 HHGR5	4REF
61.	72060027	CAP SCR 5/16-18X1-1/2 HHGR5	4REF
62.	72060046	CAP SCR 3/8-16X1 HHGR5	8REF
63.	72601552	MACH SCR #10-24X1.00	4REF
64.	72062123	NUT SS 10-24 HYLOC	4REF
65.	72060833	SCR 5/16-18X3/4 THRDCTG HWH	6REF
66.	72060989	CARR BOLT 5/16-18X1 RBNK GR2	4REF
67.	72062109	NUT 5/16-18 HEX NYLOC	9REF
68.	72062103	NUT 3/8-16 LOCK	8REF
69.	72062104	NUT 1/4-20 LOCK	2REF
70.	72062194	NUT 1/4-20 LOCK SS	1REF
71.	72063001	WASHER 1/4 WRT	6REF
72.	72063002	WASHER 5/16 WRT	18REF
73.	72063003	WASHER 3/8 WRT	16REF
74.	72063183	WASHER 1/4 SS	1REF
75.	72066349	POP RIVET .19 X 1/2GRIP	1REF
76.	72066525	HOSE CLAMP 3/4 VINYL CVR	3REF
77.	72061164	CARR BOLT 1/4-20X1-1/4 SQNK	4REF
78.	72601593	CAP SCR 1/4-20X1-1/2 FLTHD SS	1REF
79.	72060021	CAP SCR 1/4-20X1/2 HH SS	4REF
80.	72063000	WASGER 3/16 FLAT	4REF
81.	72066581	CLAMP	1REF
82.	72062109	NUT 3/16 HEX NYLOC	9REF
83.	72601329	CAP SCR 3/16-18X3/4 BTNHD	1REF
84.	72063066	WASHER 1.OO HI-STR ZN YELLO	2REF
85.	72061009	SCR - SHT MET 6 X 3/4 PH TYPEAZ	15REF
	72533739	PLUG, 3"	REF





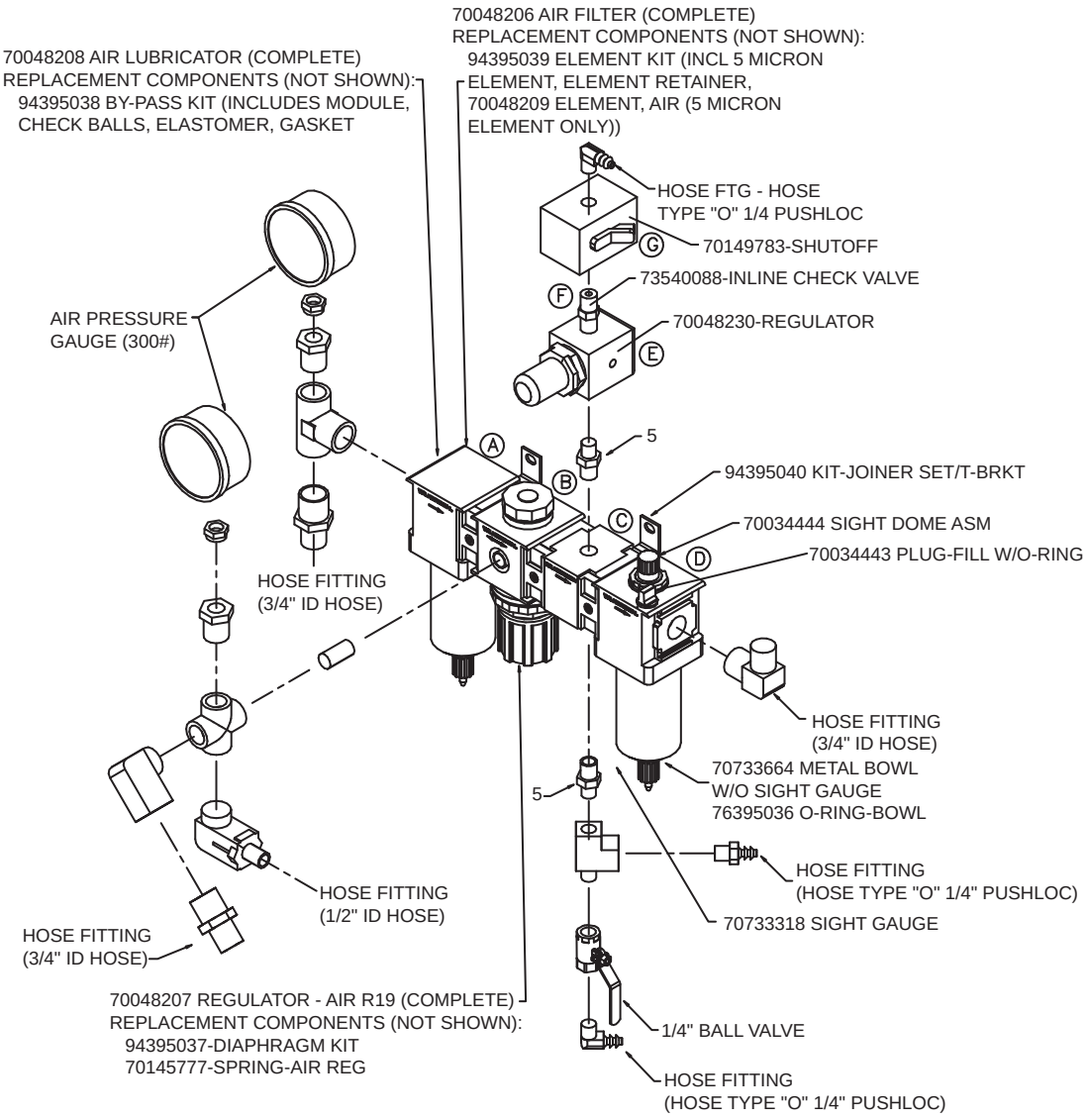
FROM 6/2000 THROUGH PRESENT.

$CaCl_2$ SYSTEM-400 GAL (41715803-2) (6/2000 ON)



FROM 6/2000 TO PRESENT.

FLR-1/2” HOSE REEL - PREDATOR W/CALCIUM SYSTEM (51716138)

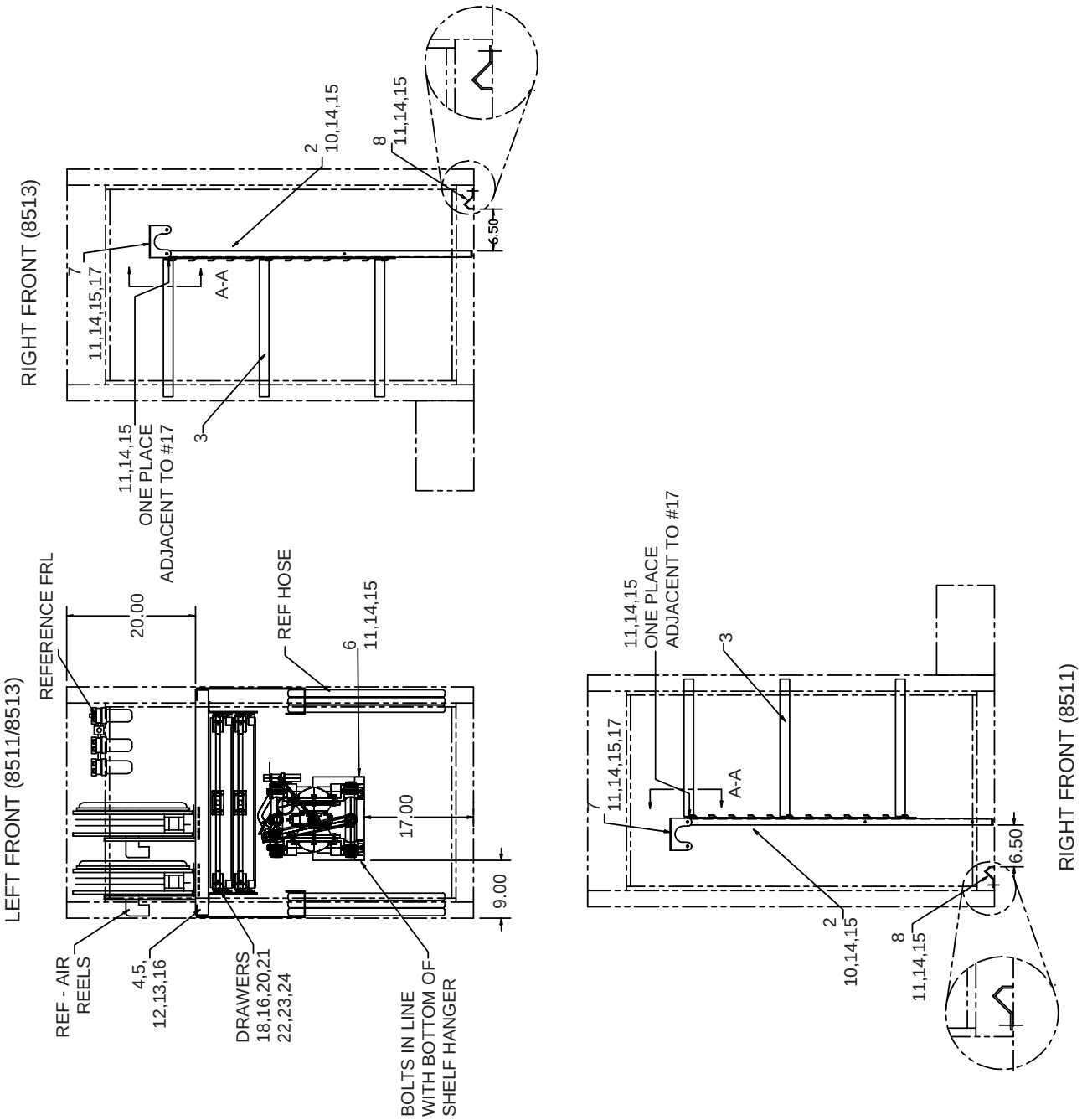


NOTE:
1) WHEN INSULATING FITTINGS, THREADS SHOULD BE SEALED WITH PRO LOCK PIPE SEALANT W/TEFLON (#51464) OR EQUIV. THIS SEALANT IS A LOW STRENGTH ANAEROBIC PASTE. THREAD TAPE IS NOT ACCEPTABLE!
2) SEE 70733454 FOR A LIST OF REPLACEMENT COMPONENTS FOR THE FRL (ITEM #2).

FROM 6/2000 TO PRESENT.

SHELF PACKAGE - PREDATOR CALCIUM CHLORIDE SYSTEM (51715868)

2.	52715818	DIVIDER WLDMT FRONT 50" HIGH	1
3.	60121842	SHELF - ADJUSTABLE	3
4.	60122138	CHANNEL	1
5.	60122228	BRACKET- ROLLOUT DRAWERS	2
6.	60250816	SHELF - CALC PUMP	1
7.	60122241	BRACKET-STOP TIRE CAGE	1
8.	60122242	BRACKET-TIRE CAGE	1
9.	60250817	BRACKET-SILLCOCK MTG	1
10.	72060023	CAP SCR 5/16-18X 3/4 HH GR5Z	4REF
11.	72060025	CAP SCR 5/16-18 X 1.0 HH GR5Z	8REF
12.	72060092	CAP SCR 1/2-13X1.25 HH GR5Z	8REF
13.	72062080	NUT 1/2-13 HEX NYLOC ZINC	8REF
14.	72062109	NUT 5/16-18 HEX NYLOC ZINC	12REF
15.	72063002	WASHER 5/16 FLAT	21REF
16.	72063005	WASHER 1/2 FLAT	16REF
17.	72063050	WASHER 5/16 LOCK	1REF
18.	70733414	DRAWER W/DIVIDERS	2
19.	60119271	BRACKET-ROLLOUT DRAWER	4
20.	72601284	SCR MACH 10-24X5/8 FLH	16REF
21.	72061283	SCR MACH 10-24X1/2 PN	16REF
22.	72062106	NUT 10-24 HEX NYLOC	32 REF
23.	70731440	DRAWER SLIDE - 16"	4
24.	60123357	BRACKET	2

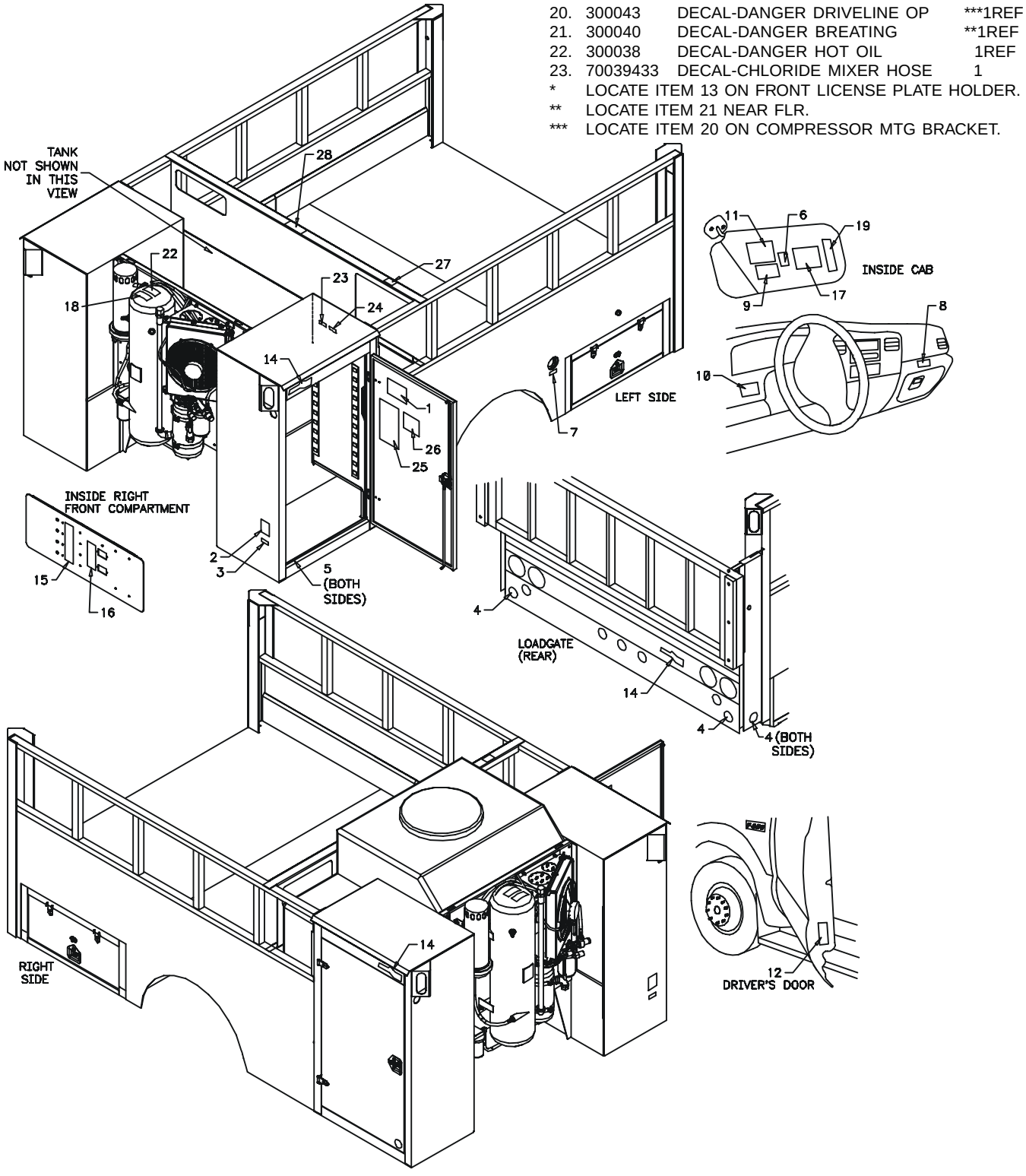


SERIAL NUMBERS PRED991001 TO PRESENT.

DECAL KIT-$CaCl_2$ SYSTEM (51715949)

1.	70395651	DECAL-PM KIT VP6160C	1
2.	71393886	DECAL-DANGER EXPLODING TANK	1
3.	70391601	DECAL-AIR TANK DRAIN	1
4.	70039057	REFLECTOR-RED	4
5.	70039058	REFLECTOR-AMBER	2
6.	70392213	DECAL-CAUTION WASH/WAX	1
7.	70392309	DECAL-DIESEL FUEL ONLY	1
8.	70392965	DECAL-THINK SAFETY	1
9.	70392982	DECAL-SERV & REPAIR	1
10.	70394092	DECAL-CAUTION BRK/COMP	1
11.	71039134	DECAL-CAUTION OIL LEVEL	1
12.	70392387	DECAL-FINAL STG VEH CERT	1
13.	70393309	LICENSE PLATE-IMT DIAMOND	*1
14.	70395654	DECAL-PREDATOR ID	3
15.	70395656	DECAL-PREDATOR LIGHTS	1
16.	70395657	DECAL-PREDATOR TRK/COMP	1
17.	301476	DECAL-CMPRSR START UP	1REF
18.	301475	DECAL-CMPRSR FLUID	1REF
19.	301474	DECAL-WARNING READ MANUAL	1REF
20.	300043	DECAL-DANGER DRIVELINE OP	***1REF
21.	300040	DECAL-DANGER BREATING	**1REF
22.	300038	DECAL-DANGER HOT OIL	1REF
23.	70039433	DECAL-CHLORIDE MIXER HOSE	1

* LOCATE ITEM 13 ON FRONT LICENSE PLATE HOLDER.
** LOCATE ITEM 21 NEAR FLR.
*** LOCATE ITEM 20 ON COMPRESSOR MTG BRACKET.



SERIAL NUMBERS PRED991001 TO PRESENT.