

**NOTE: DIMENSION "A"  
DEPENDANT ON  
REQUISITION**

**SAFETY**

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS			DRAWN BY			
NO.	DATE	BY	SPLASH GUARDS-RUBBER TRAILER & TRUCK			
1	05-28-02	DWG	S.T.			
2	11-28-06	CJW				
3	07-20-09	TOD				
			SCALE	EQU-66		
			DATE	11-18-87		
			CHECK BY	RED SHEET 1 OF 2		

FENDERS AND FLAPS: VEHICLES SPECIFIED UNDER THIS SUBCHAPTER SHALL BE EQUIPPED WITH FENDERS WHICH PROVIDE AT LEAST AS MUCH COVERAGE OF THE WHEEL AS THE ORIGINAL EQUIPMENT. ALL WHEELS SHALL BE SUFFICIENTLY COVERED WITH FENDERS OR FLAPS SO AS TO PREVENT LOOSE OBJECTS, RAIN, SNOW, AND THE LIKE FROM BEING THROWN ABOUT IN A MANNER WHICH MAY INTERFERE WITH OTHER PERSONS USING THE HIGHWAY.

REAR WHEEL SHIELDS: VEHICLE SPECIFIED UNDER THIS SUBCHAPTER EXCEPT TRUCK-TRACTOR WHILE TOWING A TRAILER SHALL BE CONSTRUCTED OR EQUIPPED AS FAR AS TO BAR WATER OR OTHER ROAD SURFACES THROWN FROM REAR WHEELS OF SUCH VEHICLE OR COMBINATION AT TANGENTS EXCEEDING 22.5 DEGREES, MEASURED FROM ROAD SURFACE FROM PASSING IN STRAIGHT LINE TO THE REAR OF SUCH VEHICLE. SEE 75 PA C554533 (RELATING TO REAR WHEEL SHIELDS)

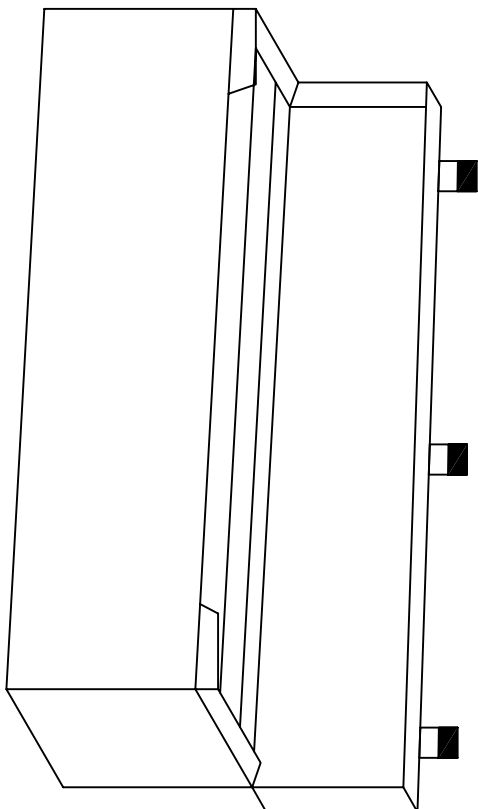
AREA 6.75"x24" ACROSS THE TOP IS ACCEPTABLE IN SOLID VIS RIBS PROVIDED IT MEASURES .225" IN THICKNESS

THE BODY OF SPLASH GUARD SHALL BE A MINIMUM OF .09375" THE TRIM AREA SHALL BE  $\frac{3}{8}$ " MINIMUM THICKNESS. THE BODY AREA IS THE AREA WITHIN THE OUTSIDE DIMENSIONS OF 24"x36" TOLERANCES +/- .250" THE WEIGHT OF THE SPLASH GUARD SHALL BE 6LBS FOR 24"x30" AND 7.5lbs x 24" x 36" MINIMUM.

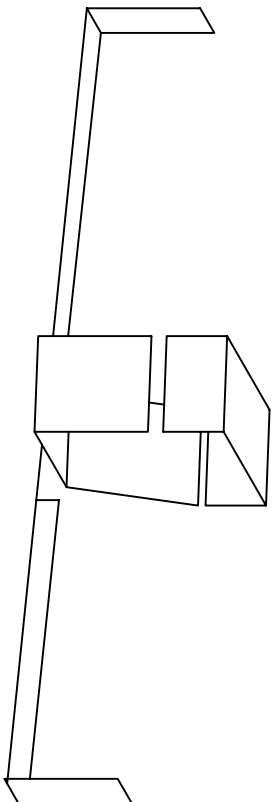
NOTE:

1. MATERIAL: MOLDED NATURAL OR SYNTHETIC BLACK TIRE CHORD IMPREGNATED RUBBER. OIL AND SALT RESISTANT.
2. ANTI-SAIL NOT ACCEPTABLE.
3. MANUFACTURERS STANDARD SIZE ACCEPTABLE IF ALL MINIMUM THICKNESS, DIMENSIONS, AND WEIGHT SPECIFICATIONS ARE MET.
4. AS PER PA VEHICLES EQUIPMENT AND INSPECTION REGULATIONS, SECTION 175-108.
5. DIMENSION "A" WILL BE 30" OF 36" AS NECESSARY, WHEN INSTALLED TO MEET PA MOTOR VEHICLE CODE OR AS SPECIFIED ON THE CONTRACT.

<b>PA DEPARTMENT OF TRANSPORTATION</b>			
<b>REVISIONS</b>		<b>SPLASH GUARDS-RUBBER TRAILER &amp; TRUCK</b>	
NO	DATE	BY	
1	05-28-02	DWG	
2	11-28-06	CJW	<small>DRAWN BY</small> S.T.
3	07-20-09	TOD	<small>SCALE</small> N/A
			<small>CHECK BY</small> RED
			<small>DATE</small> 11-18-87
			<small>EQN-66</small>
			SHEET 2 OF 2



JAMES KING & CO.  
 1-800-824-8635  
 TRIANGLE PART #1005  
 OR APPROVED EQUAL

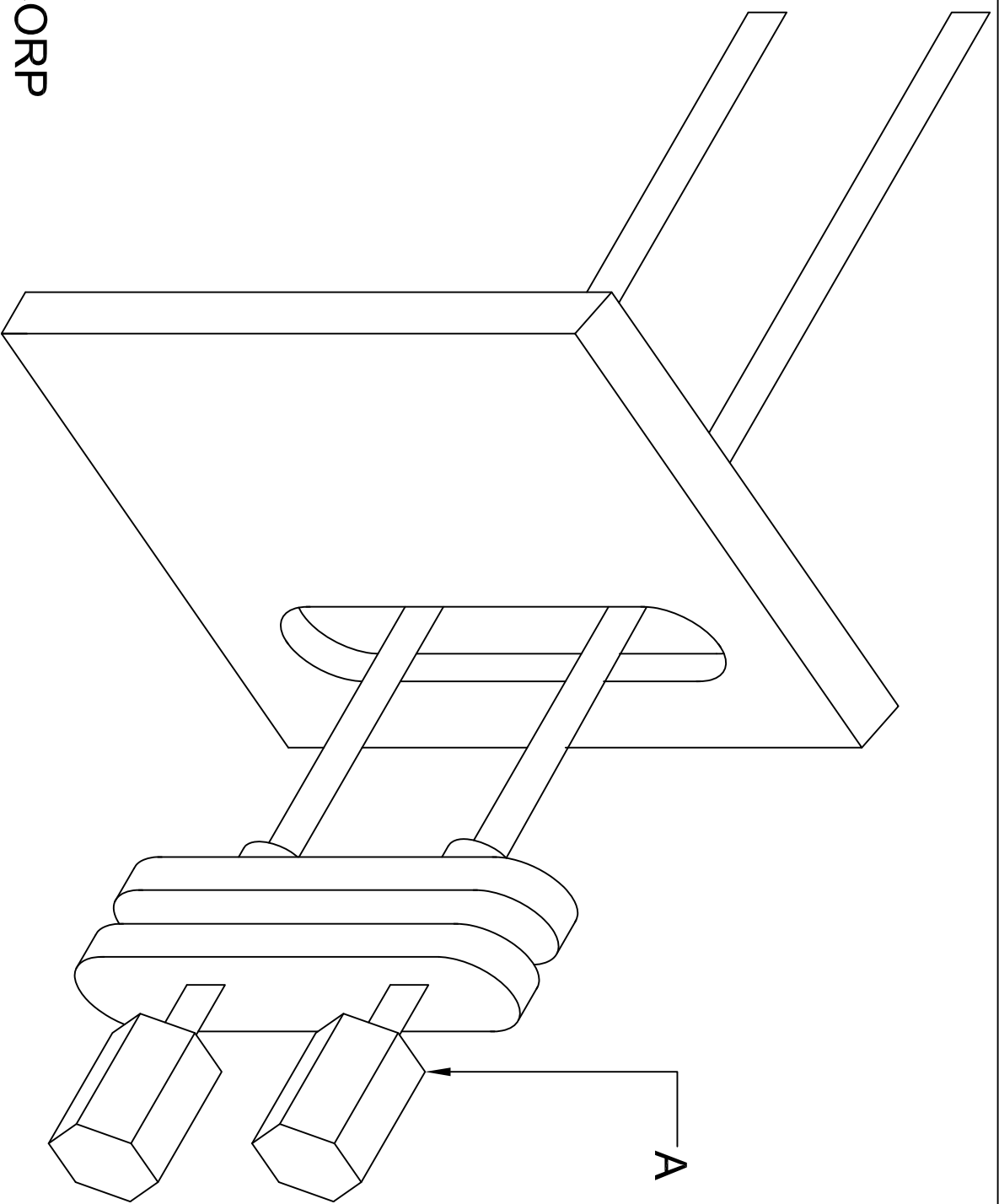


BOLTS, NUTS AND FENDER WASHERS SHALL BE  
 USED TO SECURE METAL BRACKET.

JAMES KING & CO.  
 1-800-824-8635  
 STEEL BRACKET PART #1005-B1  
 OR APPROVED EQUAL

**PA DEPARTMENT OF TRANSPORTATION**

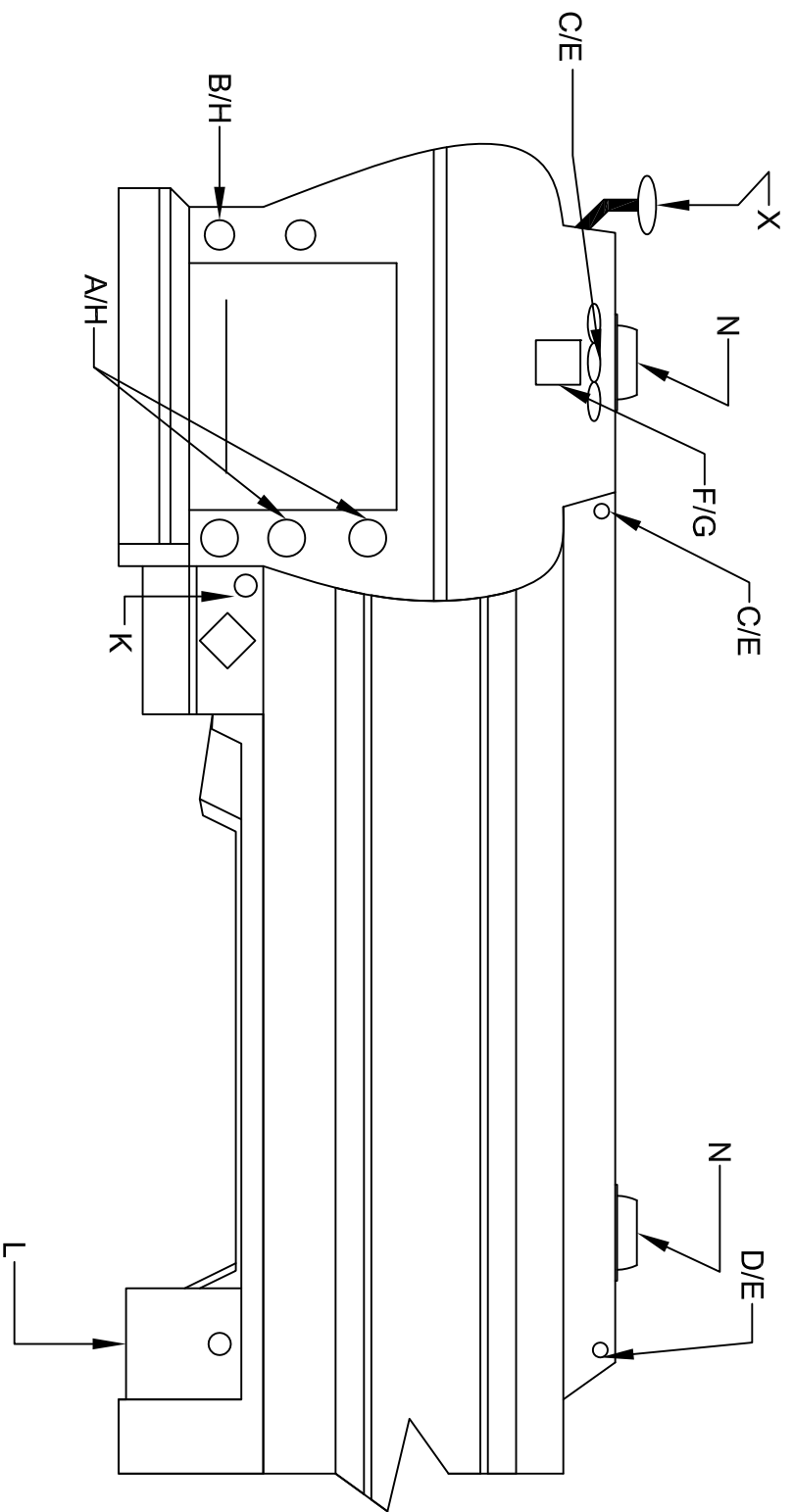
REVISIONS			DRAWN BY			SCALE		
NO.	DATE	BY	DATE	CHKD BY	SHEET	TRIANGLE STORAGE BOX AND BRACKET		
1	11-28-06	CJW	04-23-92	RED	1 OF 1	EQN-66A		
2	05-31-07	KNH						
3	07-20-09	TOD						



A.  
 PANA PACIFIC CORP  
 541 DIVISION STREET  
 CAMPBELL, CALIFORNIA 95008  
 408-374-7900

PART #531 277 C1

PA DEPARTMENT OF TRANSPORTATION			C.B. RADIO CONNECTIONS		
REVISIONS					
NO.	DATE	BY			
1	08-15-90	WHM			
2	07-02-97	DLW	DRAWN BY	WHM	SCALE
3	10-27-06	CJW	DATE	08-15-90	N/A
			CHECKED BY	RED	EQN-78
			SHEET 1 OF 1		



**NOTE:**

LIGHTING AND WIRING LOCATIONS ARE APPROXIMATE. APPLY A SMALL AMOUNT OF DIELECTRIC COMPOUND TO ALL TERMINAL AREAS UPON COMPLETION OF FINAL INSPECTION.

ALL EXTERNAL CABLES MUST BE SECURED EVERY 12in.-15in. ALL CABLE DIMENSIONS ARE SUBJECT TO VARIATION DUE TO CABLE ROUTING. IN NO CASE WILL SPLICES BE ACCEPTABLE EXCEPT IN A WEATHERPROOF JUNCTION BOX.

GROUNDING TO BE ACCOMPLISHED BY USING A GROUND WIRE THROUGHOUT. GROUND TO THE BODY IS UNACCEPTABLE.

ANY AND ALL "BODY THROUGH" HOLES SHALL HAVE GROMMETS.

THE MAIN POWER CABLE (7 WIRE) SHALL CONSIST OF AT A MINIMUM 8 GAUGE GROUND WIRE.

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS		WIRING AND LIGHTING FUEL TRUCK	
NO.	DATE	BY	
1	03-05-07	CJW	
2	05-15-07	KNH	
3	08-07-12	MJW	

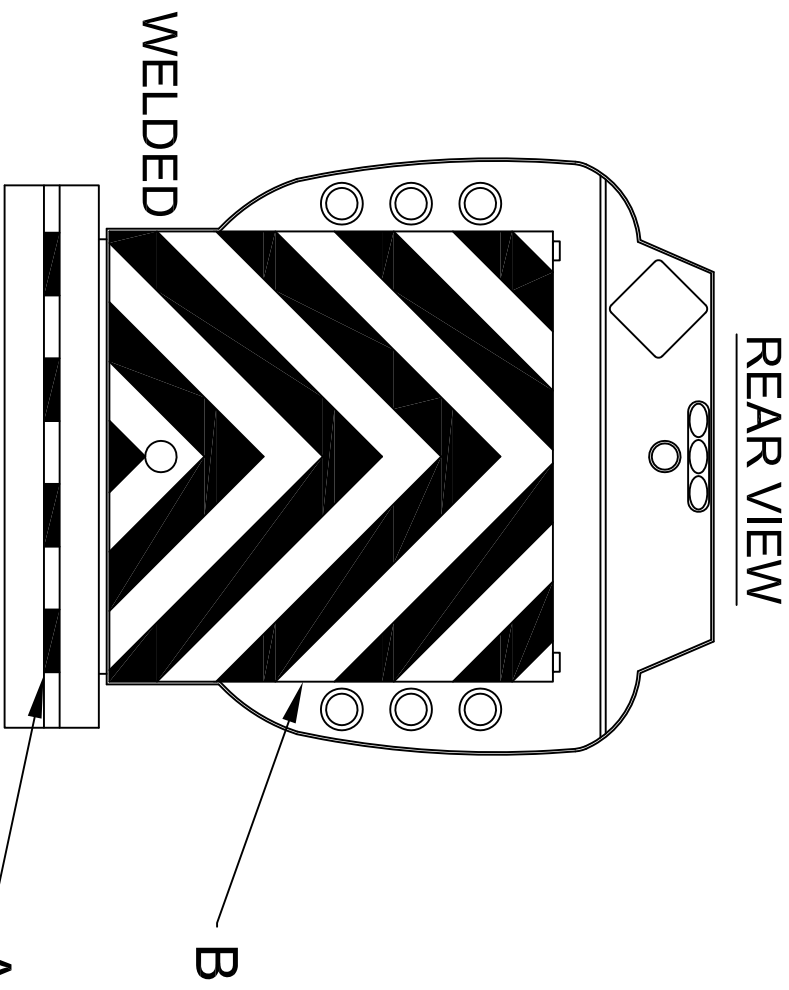
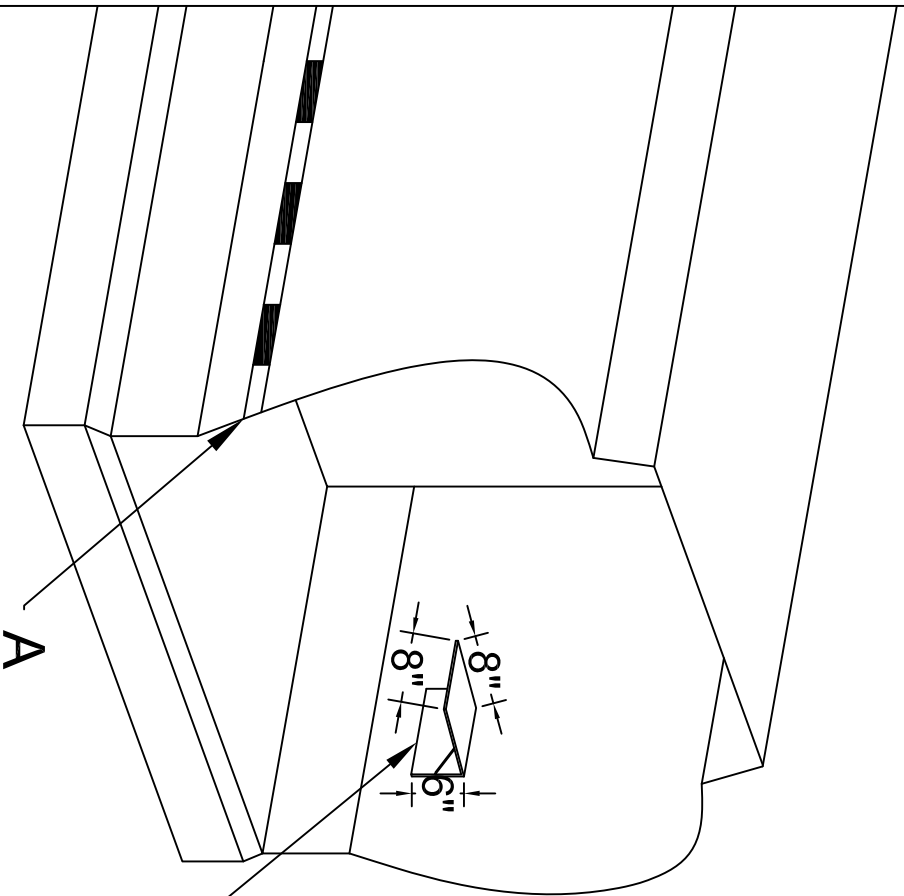
	DRAWN BY	WHM	SCALE	N/A	EQN-80XF
	DATE	10-23-92	CHK'D BY	RR	SHEET 1 OF 3

		NOUN	PART NO.	QTY.
A.	STOP, TAIL, TURN	GROTE	53102	4
B.	BACK-UP	GROTE	62211	2
C.	CLEARANCE MARKER, RED	GROTE	46742	2
D.	CLEARANCE MARKER, AMBER	GROTE	46743	2
E.	BRACKET FOR MARKER LAMP (BASE) W/PIGTAIL	GROTE	01-4399-70	7
F.	LICENSE LAMP	GROTE	60291	1
G.	BRACKET FOR LICENSE LAMP W/PIGTAIL	GROTE	01-4339-70	1
H.	GROMMETS FOR 4 IN STT & BW LAMPS	GROTE	91740	6
I.	WIRING HARNESS	GROTE	ULTRA BLUE MALE PIN HARNESS SYSTEM	
J.	CABINET LAMP	BETTS	B57JD	2
K.	REFLECTORS	PETERSON	B489R	2
L.	REFLECTORS	PETERSON	489A	2
M.	CABINET LAMP	BETTS	B47JD	2
N.	R10 - MINI BAR WARNING LIGHT	WHELEN	R10PADOT	2
X.	SAFETY MIRROR		K-10	1

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS		WIRING AND LIGHTING FUEL TRUCK	
NO.	DATE	BY	
1	12-16-96	WHM	
2	02-20-01	JLB	
3	03-05-07	CJW	
4	08-07-12	MJW	
5			

NO.	DATE	BY	SCALE	
1	12-16-96	WHM	N/A	EON-80XF
2	02-20-01	JLB		
3	03-05-07	CJW		
4	08-07-12	MJW		
5				



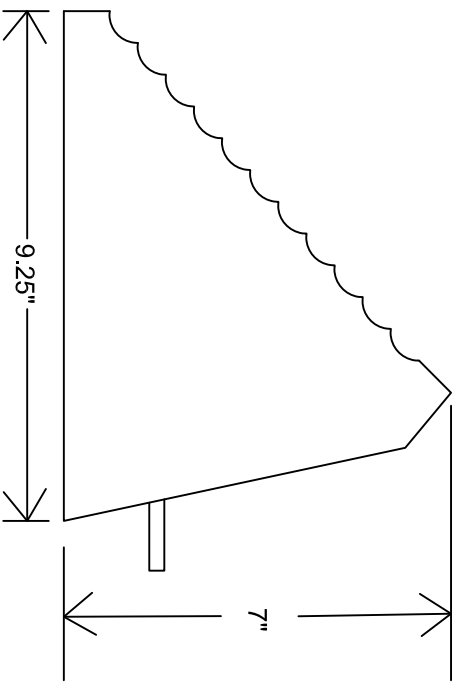
A) Reflectorized 2" wide marking shall be applied. Material shall be red/silver continuous backing Reflexite Conspicuity II System or 3M Scotchlite Conspicuity Sheeting Series 980.

B) Tape shall be Reflexite Daybright V92 conspicuity sheeting. Red - SRH14R, Yellow - SRH14Y. Two 4" sheets can be combined to equal the 8" requirement.

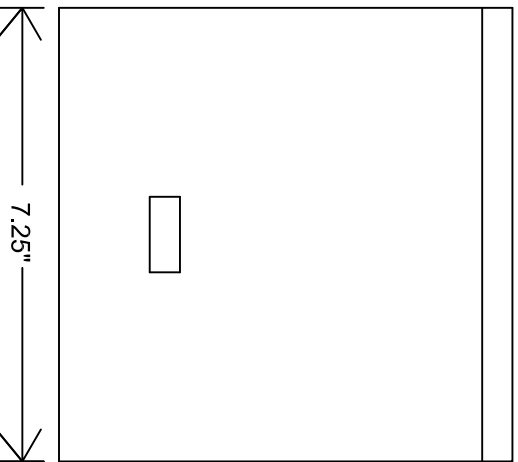
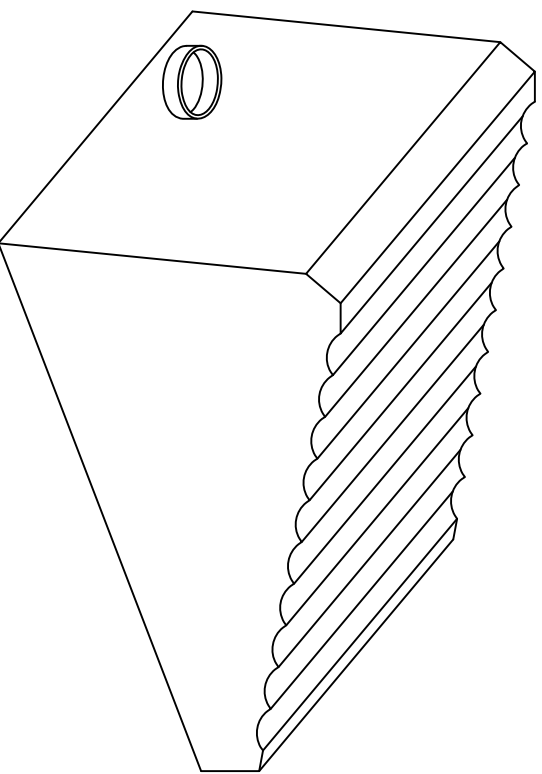
REVISIONS			WIRING AND LIGHTING FUEL TRUCK		
NO.	DATE	BY	DATE	SCALE	
1					
2					
3			08-07-12	N/A	EQN-80XF
4					SHEET 3 OF 3
5					

PA DEPARTMENT OF TRANSPORTATION

WIRING AND LIGHTING FUEL TRUCK

FINAL MOUNTING LOCATION SHALL BE DETERMINED AT THE PRE-BUILD MEETING. CHOCK HOLDERS SHALL BE ALUMINUM. TWO CHOCKS PER TRUCK SHALL BE SUPPLIED. CHOCKS SHALL HAVE 4 FEET OF  $\frac{3}{8}$  INCH NYLON ROPE CONNECTING THE TWO CHOCKS TOGETHER.

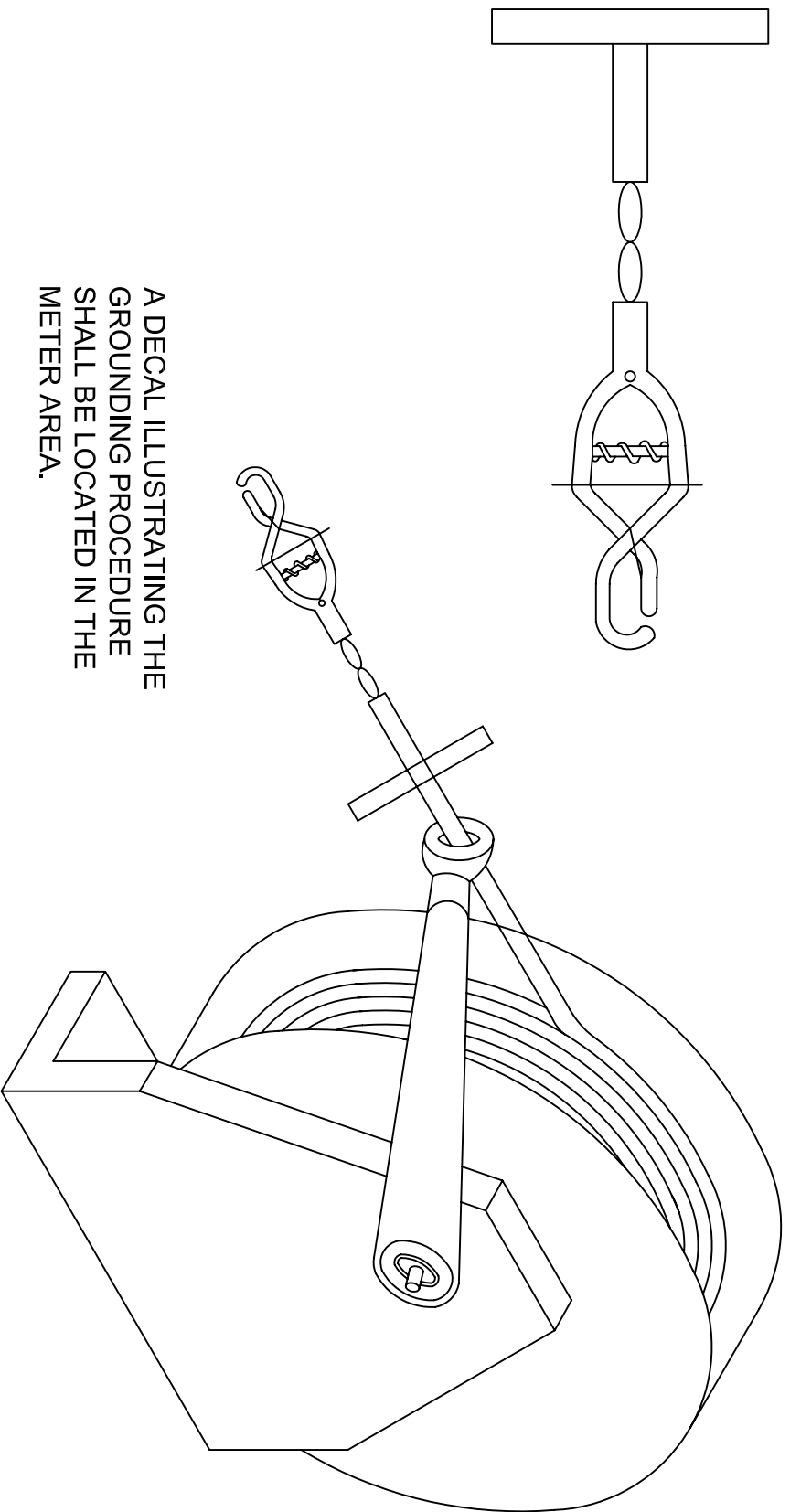


**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS			7" X 9.25" X 7.25" CHOCK AND HOLDER		
NO.	DATE	BY	DATE	SCALE	
1					
2					
3					

DRAWN BY	JJB	SCALE	N/A	EQN-82C
DATE	07-22-15	CHK'D BY		SHEET 1 OF 1





A DECAL ILLUSTRATING THE  
GROUNDING PROCEDURE  
SHALL BE LOCATED IN THE  
METER AREA.

HGR 100 GROUND REEL #1 - UNREEL AND CONNECT TO ANY AVAILABLE GROUND POST

HGR 100-75-25 GROUND REEL (STATIC NEUTRALIZER) #2 - UNREEL AND CONNECT ONE  
CABLE TO UNIT BEING FUELED AND THE SECOND LEAD TO YOUR FUEL TRUCK.

HANNAY REELS  
553 STATE ROUTE 143  
P.O. BOX 159  
WESTERLO, NY 12193-0159  
TEL: 518-797-3791

**PA DEPARTMENT OF TRANSPORTATION**

**REVISIONS**

NO.	DATE	BY
1	07-18-07	KNH
2		
3		

**PENNDOT FUEL TRUCK  
GROUNDING CABLE DIAGRAM**

DATE	DRAWN BY	SCALE
08-15-97	DLW	N/A
	CHECKED BY	
	WHM	EQN-88

SECTION 393.86 READS AS FOLLOWS: "EVERY MOTOR VEHICLE, EXCEPT TRUCK-TRACTORS, POLE TRAILERS, AND VEHICLES IN DRIVEWAY-TOWAWAY OPERATIONS, THE DATE OF MANUFACTURE OF WHICH IS SUBSEQUENT TO DECEMBER 31, 1952, WHICH IS SO CONSTRUCTED THAT THE BODY OR THE CHASSIS ASSEMBLY IF WITHOUT A BODY HAS A CLEARANCE AT THE REAR END OF MORE THAN 30 in. FROM THE GROUND WHEN EMPTY, SHALL BE PROVIDED WITH BUMPERS OR DEVICES SERVING SIMILAR PURPOSES WHICH SHALL BE SO CONSTRUCTED AND LOCATED THAT: (A) THE CLEARANCE BETWEEN THE EFFECTED BOTTOM OF THE BUMPERS OR DEVICES AND THE GROUND SHALL NOT EXCEED 30 in. WITH VEHICLE EMPTY; (B) THE MAXIMUM DISTANCE BETWEEN THE CLOSEST POINTS BETWEEN BUMPERS, OR DEVICES, IF MORE THAN ONE IS USED, SHALL NOT EXCEED 24 in.; (C) THE MAXIMUM TRANSVERSE DISTANCE FROM THE WIDEST PART OF THE MOTOR VEHICLE AT THE REAR TO THE BUMPER OR DEVICE SHALL NOT EXCEED 18 in.; (D) THE BUMPER OR DEVICES SHALL BE LOCATED NOT MORE THAN 24 in. FORWARD OF THE EXTREME REAR OF THE VEHICLE; (E) AND THE BUMPER OR DEVICES SHALL BE SUBSTANTIALLY CONSTRUCTED AND FIRMLY ATTACHED. MOTOR VEHICLES CONSTRUCTED AND MAINTAINED SO THAT THE BODY, CHASSIS, OR OTHER PARTS OF THE VEHICLE AFFORD THE REAR END PROTECTION CONTEMPLATED SHALL BE DEEMED TO BE IN COMPLIANCE WITH THIS SECTION."

THE REGULATIONS ALSO REQUIRE ALL MOTOR VEHICLES TRANSPORTING HAZARDOUS MATERIALS REQUIRING PLACARDING BE EQUIPPED WITH REAR END PROTECTION (REFERANCE 49CFR PART 397, 49 CFR SECTION 177.823, 49 CFR PART 172, AND 49 CFR SECTION 171.12A).

ALTHOUGH SECTION 393.86 DOES NOT SET FORTH SPECIFIC PERFORMANCE REQUIREMENTS FOR THE REAR END PROTECTION STRUCTURE, SUBPART J - SPECIFICATIONS FOR CONTAINERS FOR MOTOR VEHICLE TRANSPORTATION OF PART 178 - SHIPPING CONTAINER SPECIFICATIONS OF SUBCHAPTER C - HAZARDOUS MATERIAL REGULATIONS OF CHAPTER I - RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION DOES CONTAIN SPECIFIC PERFORMANCE REQUIREMENTS FOR REAR END PROTECTION ON CARGO TANK MOTOR VEHICLES (REFERENCE SECTIONS 178.337-10(D), 178.338-10(C), 178.345-8(D), 178.346-8, 178.347-8, AND 178.348-8). PENNSYLVANIA HAS ADOPTED 49 CFR 393.86 REAR END PROTECTION FOR COMMERCIAL MOTOR VEHICLES WITH A GVW OF 17,000 lbs. / 7711.07 kg. OR MORE OPERATED IN INTRASTATE COMMERCE, AND ANY SIZE VEHICLE HAULING HAZARDOUS MATERIALS REQUIRING PLACARDS WITH AN ADDITIONAL REQUIREMENT: "SOME PART OF THE HORIZONTAL BUMPER BAR SHALL FALL WITHIN 16-30in. / 40.64-76.2cm. ABOVE GROUND LEVEL." SEE TITLE 67 CHAPTER 175 OF THE PENNSYLVANIA CODE FOR THE SPECIFIC REQUIREMENTS FOR REAR END PROTECTION ON COMMERCIAL MOTOR VEHICLES WITH A GVW OF 10,001-17,000 lbs. / 4536.38-7711.07 kg. OPERATED IN INTRASTATE COMMERCE.

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION**

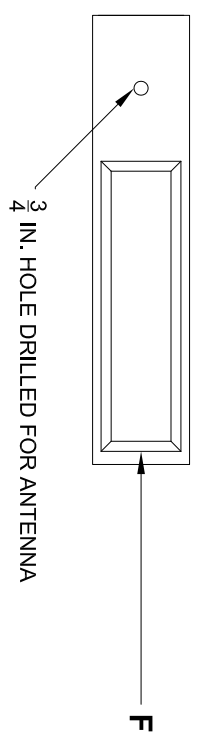
**REVISIONS**

NO	DATE	BY	UNDERRIDE PROTECTION		
1	07/08/97	DLW			
2	07/01/03	KGK	DLW	N/A	EQN -118
3	06/26/09	TOD	DATE 02-04-92	CHK'D BY RR	SHEET 1 OF 1

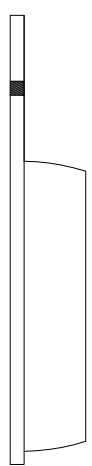
**ANY / ALL REVISIONS SHALL  
SUPERSEDE THE ABOVE**

**PLATFORM MOUNTED  
LED LIGHT BAR & ANTENNA HOLE**

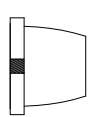
TOP VIEW



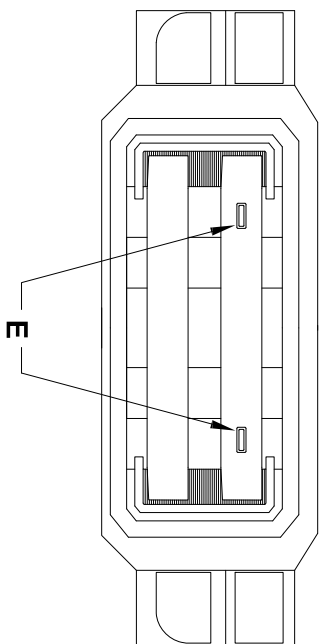
FRONT VIEW



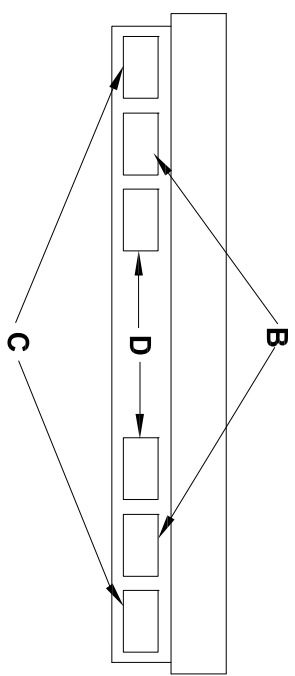
SIDE VIEW



FRONT VIEW



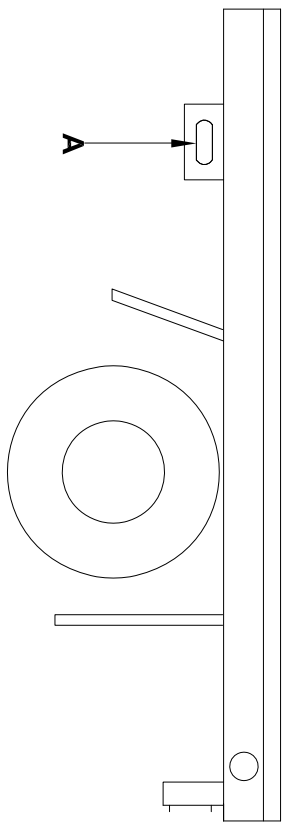
REAR VIEW



The purpose of this drawing is to show locations for Body Lighting, Whelen part # PADOTSY8.

- A. LINZ6AD Amber Warning Light, grommet (flush) mounted, one each side.
- B. M6BUD Back up Lights with Brush Guards.
- C. M5BTTD Stop / Tail / Turn Lights with Brush Guards.
- D. M6AD Amber Warning Lights with Brush Guards.
- E. LINZ6AD Amber Warning Light, both grommet mounted (flush with Front Grill).
- F. R10PADOT, R10-Mini Bar Warning Light.

SIDE VIEW



**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS

NO.	DATE	BY	UNIVERSAL TRUCK LIGHTING
1	08-06-12	MJW	
2			
3			

UNIVERSAL  
TRUCK LIGHTING

DRAWN BY	TOD	SCALE	N/A	EQN-120Q
DATE		CHK'D BY	TOD	SHEET 1 OF 1

THIS VEHICLE SHALL COMPLY WITH THE RULES OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA) IN THAT:

THE MOUNTING HEIGHT OF THE HORIZONTAL STRIPES ARE RESTRICTED TO THE SAME HEIGHT AS OTHER RETROREFLECTIVE DEVICES CURRENTLY REQUIRED BY STANDARD NUMBER 108. THE CENTER OF THE MATERIAL MUST NOT BE LESS THAN 15in. ABOVE THE ROAD SURFACE, AND THE UPPER EDGE NOT MORE THAN 60in. ABOVE IT.

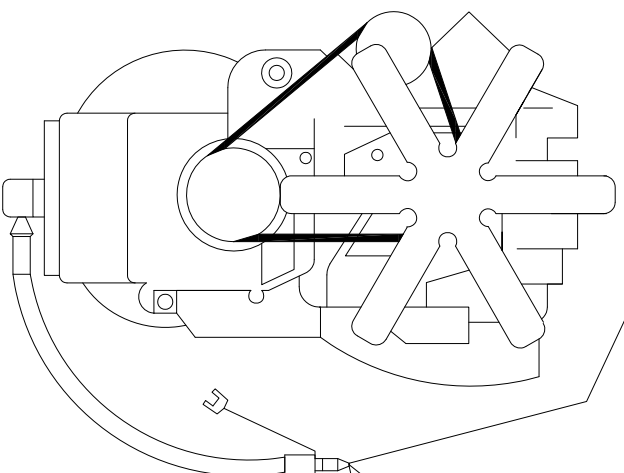
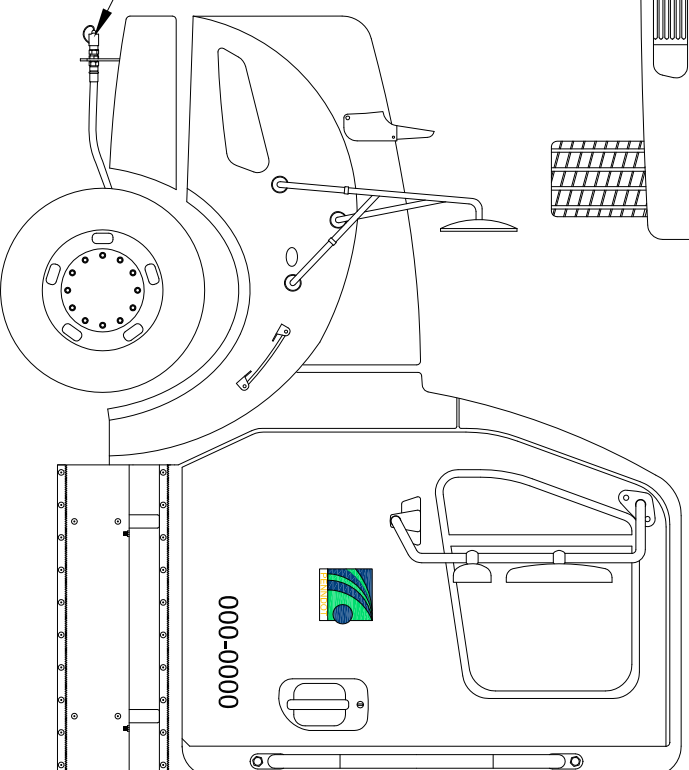
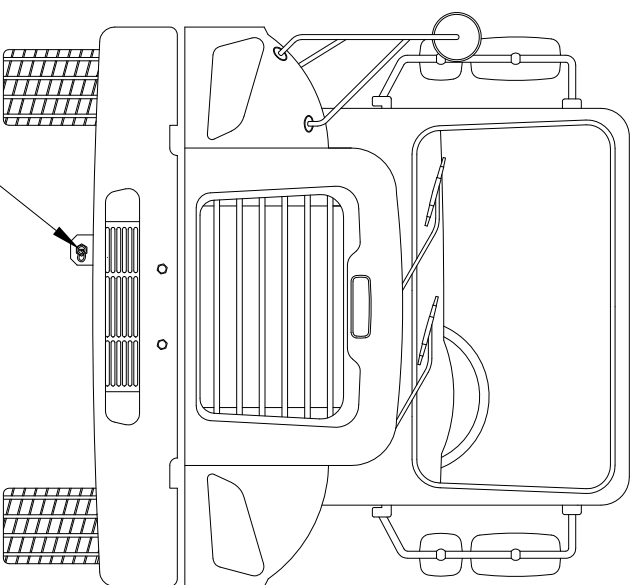
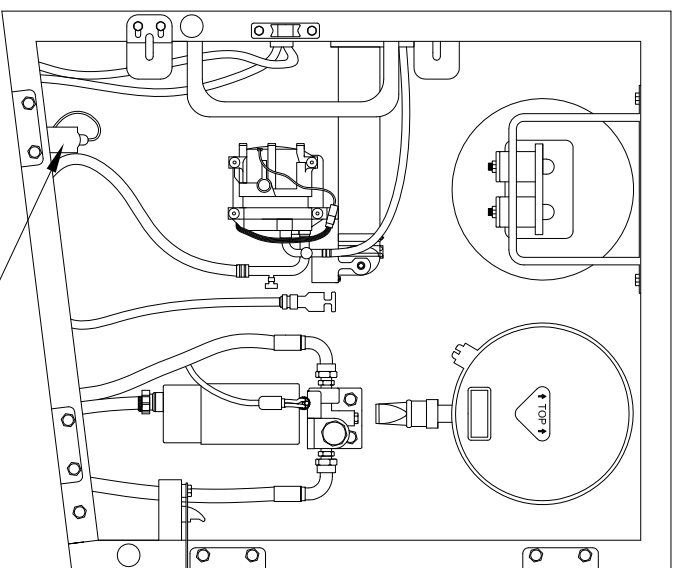
REFLECTIVE MATERIAL SHALL BE APPLIED TO THE HORIZONTAL BAR OF THE REAR UNDERIDE DEVICE IN ADDITION TO THE FLOOR LEVEL HORIZONTAL STRIPE. THE UPPER CORNERS ARE TO BE MARKED BY TWO 90 DEGREE ANGLE BRACKETS OF WHITE STRIPES 12in. BY TWO INCHES WIDE, INDICATING THE WIDTH AND HEIGHT OF THE TRAILER.

THE CONFIGURATION SHALL IDENTIFY THE VEHICLE AS TO ITS ESTIMATED SIZE AND THE CLOSING DISTANCE TO IT. THE DISTRIBUTION OF SPACES AND MATERIALS SHALL BE AS UNIFORM AS PRACTICAL AND INDICATE THE FULL LENGTH AND WIDTH OF THE VEHICLE. THE COLORS SHALL BE PLACED IN ALTERNATING SEQUENCE WITH MORE THAN TWO-THIRDS OF THE MATERIAL IN COLOR.

CONSPICUITY TAPE SHALL BE REFLECTORIZED. 2in. WIDE, MATERIAL SHALL BE APPLIED. MATERIAL SHALL BE RED/SILVER CONTINUOUS BACKING REFLEXITE CONSPICUITY II SYSTEM OR 3M SCOTCHLITE CONSPICUITY SHEETING SERIES 980.

THE MOST CURRENT REGULATIONS SHALL BE ADHERED TO.

REVISIONS			CONSPICUITY TAPE STRIPING REQUIREMENTS		
NO.	DATE	BY	DRAWN BY	SCALE	EQN-127A
1	05-16-02	DWG	DLW	N/A	EQN-127A
2	11-03-06	CJW	DLW	N/A	EQN-127A
3	01-02-09	MHH	DLW	N/A	EQN-127A



DISCONNECT  
COUPLING  
FLOCS  
ENGINE KIT

**PA DEPARTMENT OF TRANSPORTATION**

**REVISIONS**

NO.	DATE	BY
1	07-01-03	BLD
2	10-20-06	CJW
3	06-19-13	JFM

**FAST LUBE OIL CHANGE SYSTEM  
OVERVIEW AND PARTS LIST**

SCALE	DATE
N/A	08-22-97

EQN-351A  
WHM SHEET 1 OF 2

1. CONTACT AEROQUIP WITH YOUR DRAIN PAN PLUG SIZE
2. AEROQUIP DEALER TELEPHONE NUMBERS:

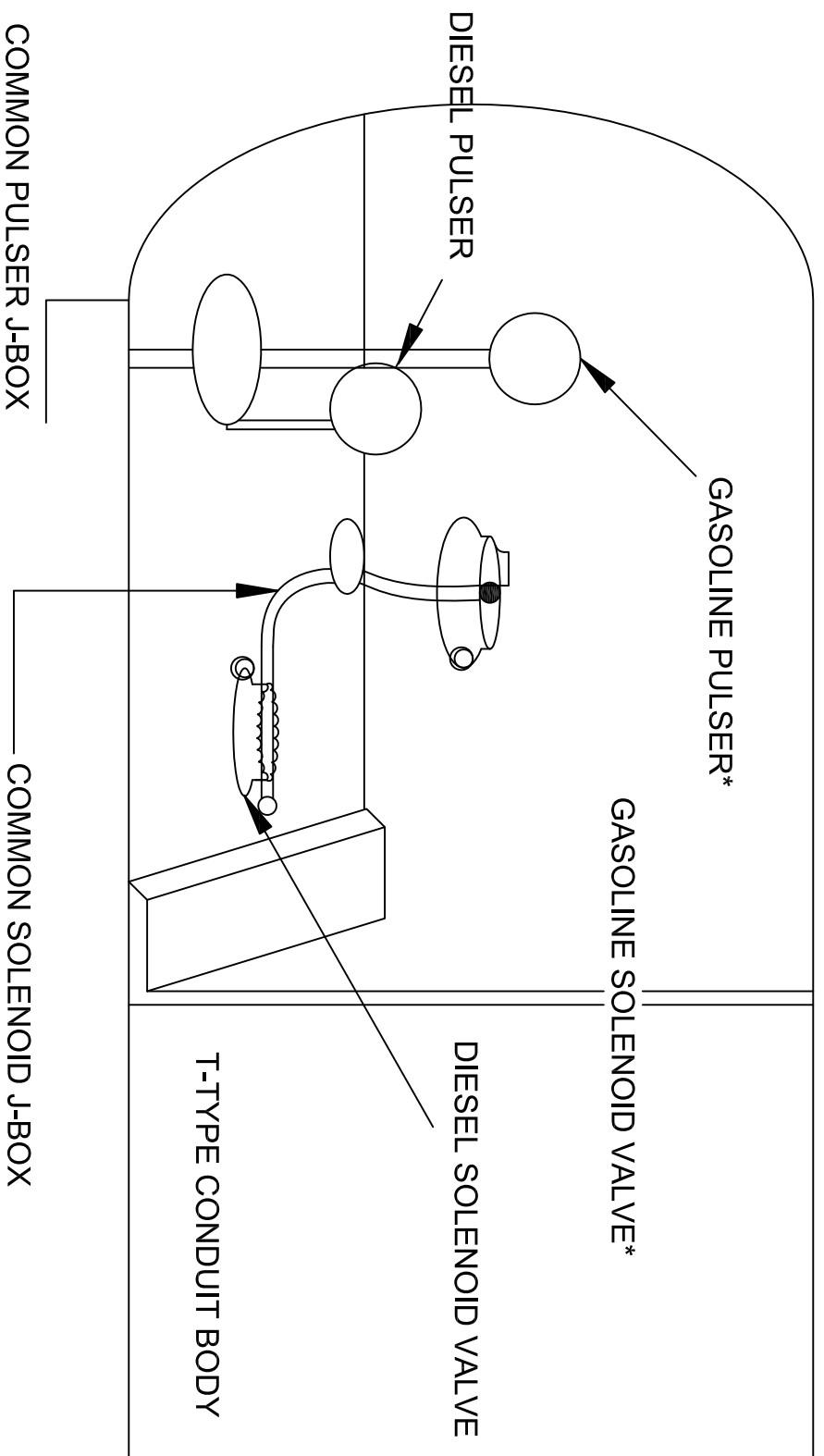
ADVANCED FLUID CONNECTORS..... 717-757-1068  
 AIR BRAKE & POWER EQUIPMENT CO.. 717-622-6188  
 AMERICAN BEARING & POWER..... 717-569-3291  
 GOODALL RUBBER COMPANY ..... 610-534-2100  
 POWER DRIVES INC..... 814-833-8181  
 R L MILLER INC..... 412-833-6800  
 R L MILLER INC..... 814-456-8900  
 SRG/BEVCO..... 610-358-3100  
 VOTO MANUFACTURERS SALES CO.... 814-226-7101

**FLOCS SHALL INCLUDE, BUT NOT LIMITED TO:**

- A. DUST CAP 5657-12
- B. HOSE TO SUIT LENGTH
- C. HOSE FITTING TO SUIT
- D. ADAPTER TO SUIT
- E. HOSE CLAMP #900729-6
- F. BRACKET TO SUIT
- G. COUPLING 5602-12-12S

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS			FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST		
NO	DATE	BY	SCALE	CHK'D BY	
1	07-01-03	BLD	DLW	N/A	EQN-351A
2	10-20-06	CJW			
3	06-19-13	JFM			



**NOTE:**

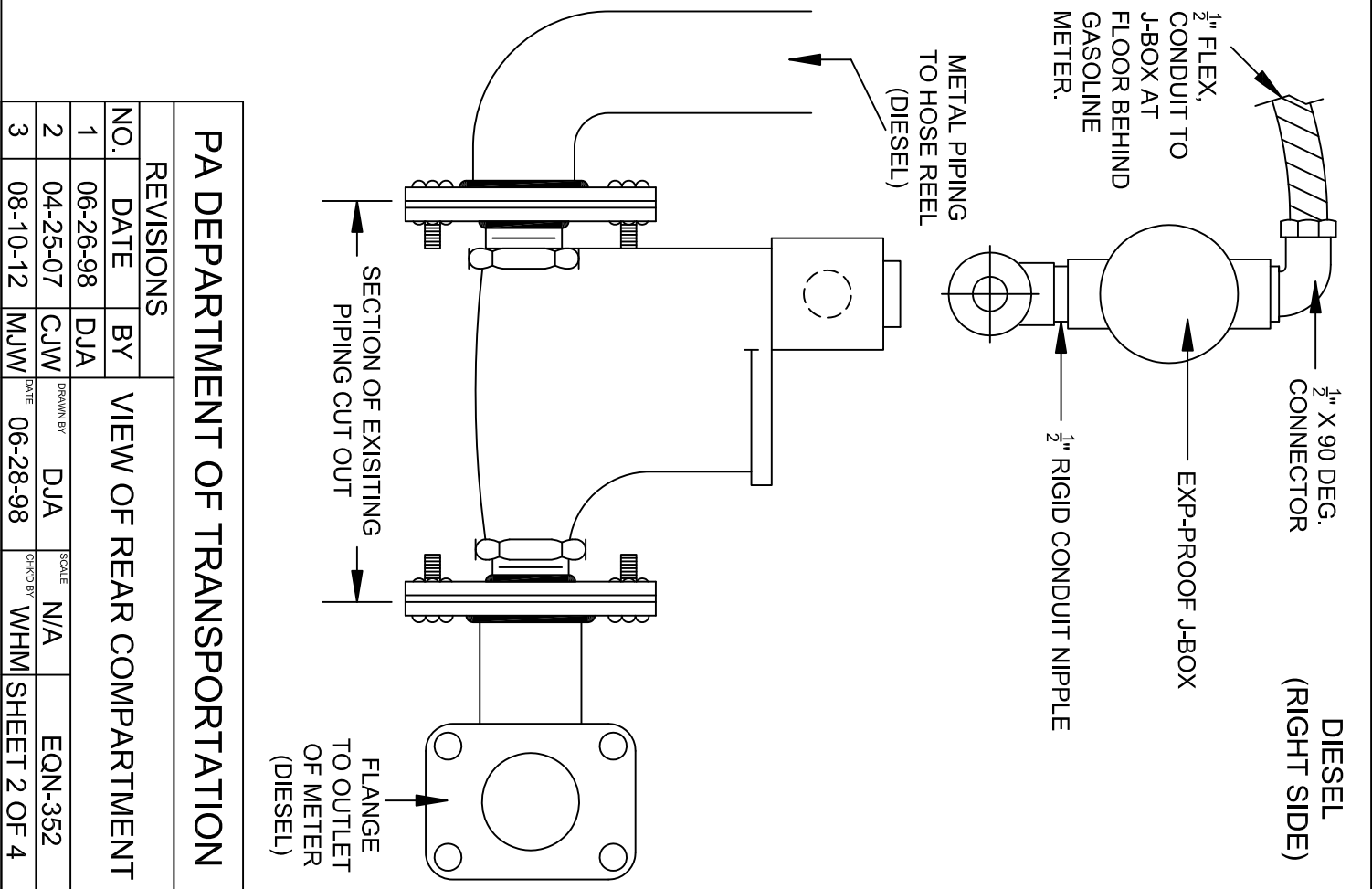
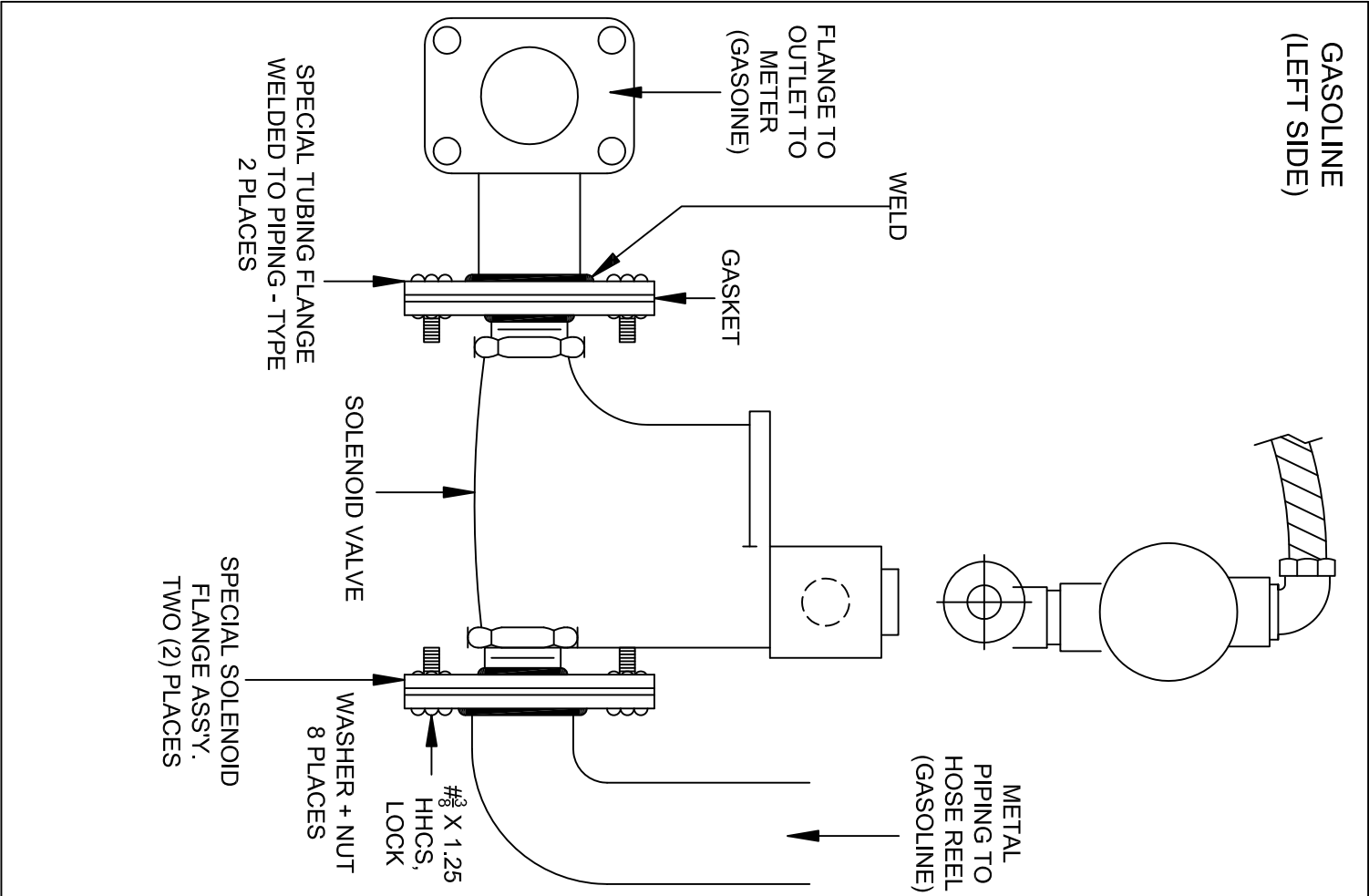
- 1.) TRUCK VENDOR SHALL SUPPLY SOLENOID VALVES AND METERS WITH PULSERS. SOLENOID VALVE: SIZE SUIT, 12V dc REF: ITT GENERAL CONTROL OR EQUAL. METER: 1.5in. METER WITH REGISTER 10:1 "LIQUID CONTROLS" ELECTRONIC DRY CONTACT, NON-RESET PULSER MODEL. D4111, TICKET PRINTER ZERO-START, AIR ELIMINATOR AND STRAINER. REF: "LIQUID CONTROLS" MODEL M-5-1 OR EXACT EQUAL.

A.) \* NOT APPLICABLE IF SINGLE PRODUCT TANK

REVISIONS			FUEL TANK W/AUTOMATED FUEL SYSTEM, SOLENOID VALVES, PULSERS CONDUIT LAYOUT		
NO.	DATE	BY	DATE	SCALE	SHEET
1	6-29-88	DJA	06-22-88	N/A	EQN-352
2	4-25-07	CJW			
3	8-10-12	MJW			

**PA DEPARTMENT OF TRANSPORTATION**

1 OF 4

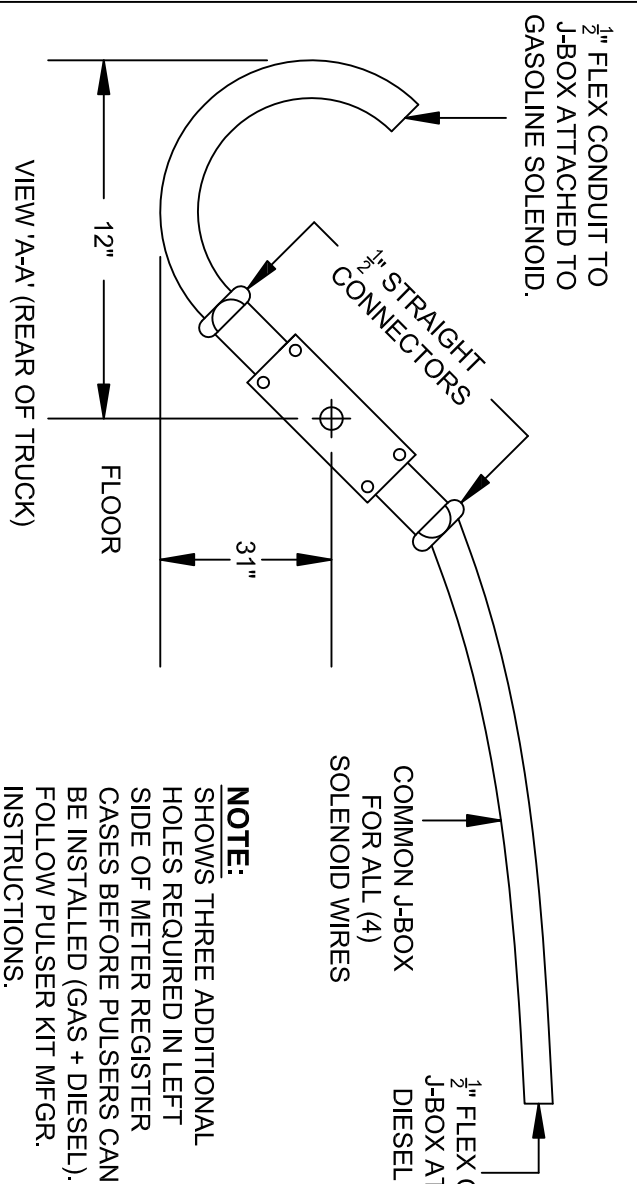


**PA DEPARTMENT OF TRANSPORTATION**

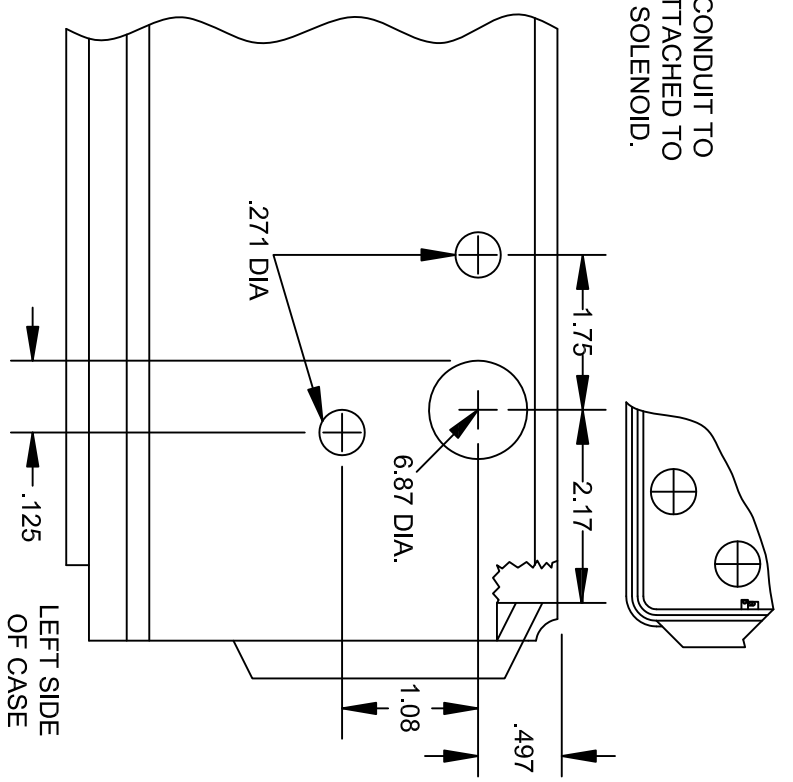
REVISIONS		VIEW OF REAR COMPARTMENT	
NO.	DATE	BY	
1	06-26-98	DJA	
2	04-25-07	CJW	
3	08-10-12	MJW	

NO.	DATE	BY	SCALE	SHEET
1	06-26-98	DJA	N/A	EQN-352
2	04-25-07	CJW	N/A	
3	08-10-12	MJW		SHEET 2 OF 4

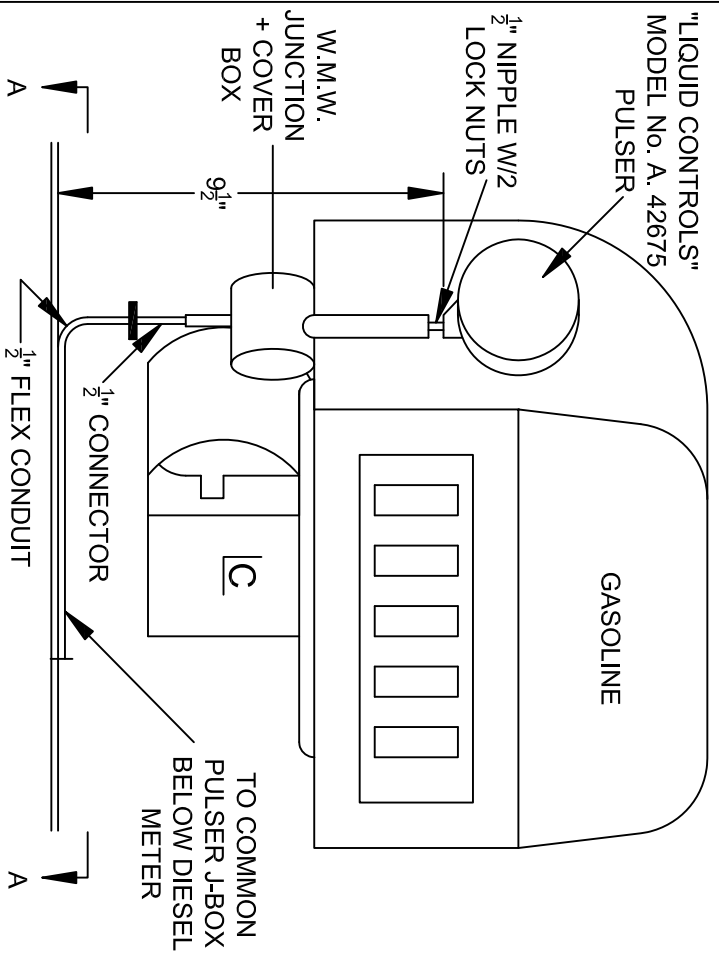




**NOTE:**  
SHOWS THREE ADDITIONAL HOLES REQUIRED IN LEFT SIDE OF METER REGISTER CASES BEFORE PULSERS CAN BE INSTALLED (GAS + DIESEL). FOLLOW PULSER KIT MFGR. INSTRUCTIONS.



**NOTE:** REGISTER/METER/PULSER ASSEMBLY MAY BE AVAILABLE AS A COMPLETE UNIT FROM V.R.



REVISIONS			FUEL TANK W/ AUTOMATED FUEL SYSTEM LEFT SIDE-REAR COMPARTMENT		
NO.	DATE	BY	DATE	SCALE	
1	04-25-07	CJW			
2	08-10-12	MJW	06-30-98	N/A	EQN-352
3				WHM	SHEET 3 OF 4

**PA DEPARTMENT OF TRANSPORTATION**

SYSTEM LEFT SIDE-REAR COMPARTMENT

EQN-352

SHEET 3 OF 4



PENNDOT FUEL TANK TRUCK  
TANK CATWALK

LOCATION: DRIVER'S SIDE ONLY AND SHALL BE POSITIONED TO PERMIT AN AVERAGE HEIGHT MAN TO REACH AND SERVICE THE TWDK(?) FUEL MANHOLDLES IN THE STANDING POSITION.

DIMENSIONS: FULL TANK LENGTH, APPROX. 9 TO 10 INCHES WIDE, BUT SHALL NOT EXCEED THE LEGAL OVERALL VEHICLE WIDTH OF 96 INCHES.

SAFETY: THE TANK MFG. SHALL WELD A PLATE TO THE TANK SO A SAFE AND LEGAL INSTALLATION OF THE REFERENCED SAFETY STEPS CAN BE OBTAINED BY MEANS OF WELDING TO THIS AFORMENTIONED TANK OUTER LINER.

THE TANK MFG. SHALL SUPPLY THE REFERENCED STEP MFG. A DRAWING OF THE SUCCESSFUL TANK MFGS. RADIUS, TO INSURE THE DEPARTMENT A TOTALLY ENGINEERED PRODUCT.

ATTACHMENT: THE PICTURE BELOW OF THE PROPOSED CATWALK MATERIAL IS A GUIDE. THE DEPT. DESIRES THE ATTACHING BRACKET TO BE ONE PIECE, FULL LENGTH, TO PERMIT UPPER AND LOWER WELDING TO THE TANK GUSSETT PLATE.

AS MFG. BY: Bustin Industrial Products Inc.  
P.O. Box 826  
Dover, New Jersey 07801  
Phone: (201)-366-8800

IKG  
R.D. #2 Route 910  
Cheswick, PA 15024  
Phone: (412)-828-2223

Dhio Grating Inc.  
5299 Southway SW  
Canton, Ohio 44706-1992  
Phone: (216)-477-6707

PA DEPARTMENT OF TRANSPORTATION

REVISIONS		PENNDOT FUEL TRUCK TANK CATWALK LOCATION	
NO.	DATE	BY	SCALE
1	07/02/01	DJA	N/A
2	04-11-06	KNH	N/A

DRAWN BY  
DJA

DATE  
06/19/98

CHECKED BY  
WHM

SHEET 2 OF 2

## Centralized Lubrication System On Road Equipment EQN - 501

There shall be an automatic centralized lubrication system professionally installed to maintain all the daily, weekly, and monthly lubrication points. Only electrically controlled, #2 chassis grease systems shall be accepted. The use of pneumatic systems is unacceptable. The requirements for the lubrication system components and installation procedures are outlined below. It is the responsibility of the vendor to ensure that the automatic lubrication system complies with all of these requirements.

### 1. Performance Requirements

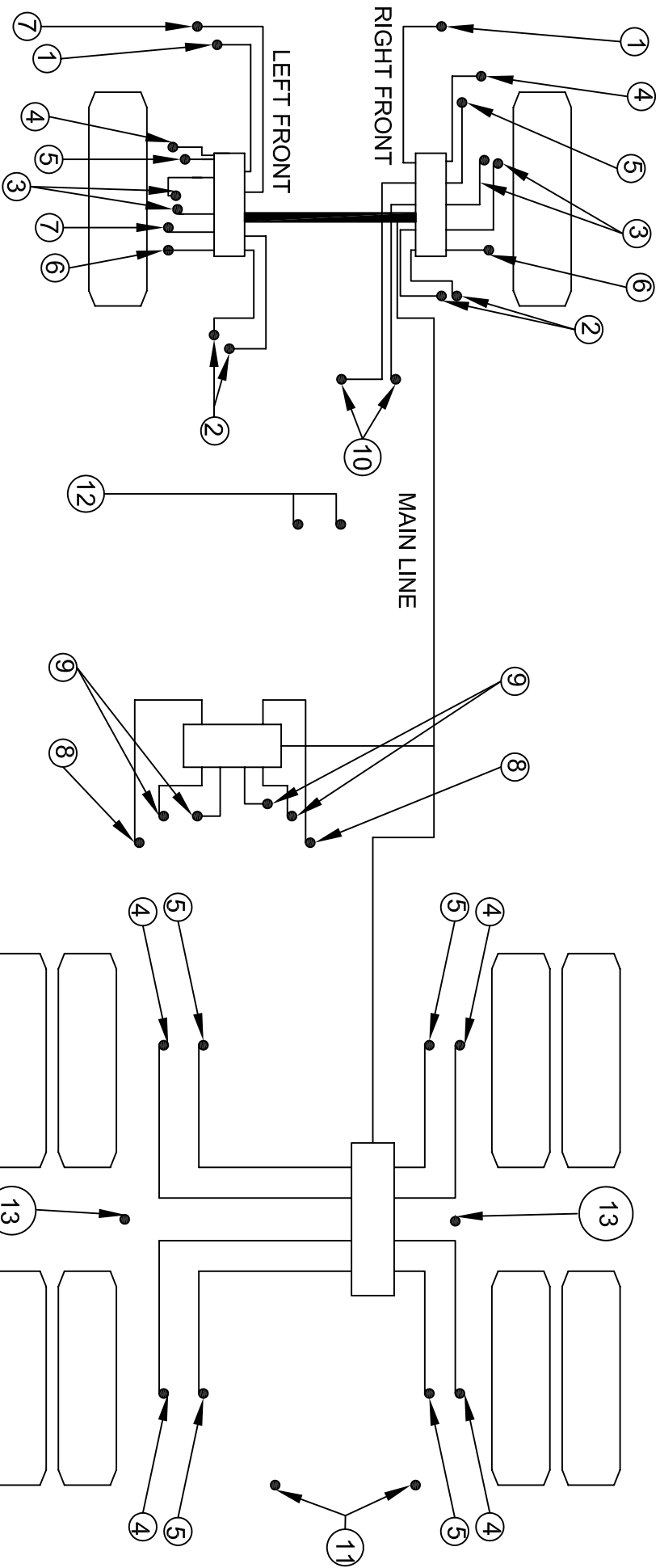
- The system pump shall be capable of delivering NLGI #2 grease over a temperature range of minus 10 degrees Fahrenheit to 120 degrees Fahrenheit.
- The pump shall have an integral adjustable timer to change the grease delivery intervals as needed.
- The system shall use a fused electric pump, either 12 Volt DC or 24 Volt DC depending on application. Pneumatic pumps are not acceptable.
- The pump shall be equipped with a pressure relief valve device at the pump outlet to protect the pump from damage due to over pressure.
- For ease of service, the pump shall have a pumping element located on the side that can be removed and replaced or repaired as needed without having to remove or disassemble the pump.
- The pump shall use a clear or translucent reservoir to allow for visual inspection of the grease level. Reservoir shall have a full level indicator. Bladder type reservoirs are not acceptable.
- The grease reservoir shall be a minimum four pound capacity.
- The system shall have a cab mounted fault light that will notify the operator of a lube system fault and low grease level. If any point in the system will not take grease, the fault light shall illuminate.
- The system shall be a positive displacement series progressive type, using primary and secondary valves.
- All secondary valves shall be non-segmented to minimize the potential leak path and or sources of contamination.
- All valves shall be made of corrosion resistant coated carbon steel.
- The positive displacement proportioning valves shall have a tee and high back pressure grease fittings at each valve inlet for manual filling, system testing, and to fill repaired lines.
- The system shall have a manual override fitting to enable the system to be manually operated if the pump is inoperable.
- Equipment shall have a 2 year manufacturer's warranty.

### 2. Installation Requirements - On Road

- The system shall use only high pressure hose (4,000 psig operating, 10,000 psig burst). All hoses are to be of US standard sizes (1/8" ID hose 5/16 OD) and readily available from local sources.
- All hoses shall use a two piece re-usable hose end with quick disconnects at the valve outlet for ease of inspection and repair.
- All lines from the secondary valves to the chassis or body inlet points shall be flexible with at least a 500 PSI working pressure. All tubing shall be standard size (1/4 inch OD) and readily available from local sources.
- All line runs will be secured to the chassis or air lines via tie wraps. Protective wrap shall be used for all lines run over any edge of the chassis and especially at the termination points for front suspension including upper & lower king pins, tie rod ends and any exposed lines that are not fixed. The use of steel tubing is prohibited.
- The pump shall be installed in a safe location on the truck chassis that is protected and easy to monitor the grease level and refill. For exact mounting location, contact PennDOT Equipment Division, Specification Unit - 717.787.2123
- Ground Level filling shall be provided for all lube systems. Remote lines are acceptable if reservoir is viewable from remote fill location.
- Installations shall be warranted for 2 years of operation.

PA DEPARTMENT OF TRANSPORTATION				
REVISIONS			CENTRALIZED LUBE SYSTEM	
NO.	DATE	BY		
1			SCALE N/A	EQN-501
2			DRAWN BY TOD	
3			DATE 6-8-09	CHK'D BY SHEET 1 OF 2

# MINIMUM TYPICAL LUBE POINTS TANDEM AXLE



MINIMUM TYPICAL VEHICLE LUBE POINTS.

\*ALL LUBRICATION POINTS SHALL BE INCORPORATED INTO THE ON-BOARD GREASE SYSTEM, INCLUDING ALL CHASSIS AND BODY POINTS, EXCEPT LOCATIONS RESTRICTED BY ROTATING DESIGN; IE: DRIVESHAFT & PTO

1. FRONT SPRING PIN
2. FRONT SPRING SHACKLES (UPPER AND LOWER)
3. KING PIN (UPPER AND LOWER)
4. BRAKE CAM SHAFT
5. BRAKE SLACK ADJUSTER
6. TIE ROD
7. DRAG LINK
8. FIFTH WHEEL PIVOT (IF APPLICABLE)
9. FIFTH WHEEL PLATE (IF APPLICABLE)
10. CLUTCH CROSS SHAFT
11. REAR DUMP BED HINGE (1 EACH SIDE)
12. TOP AND BOTTOM OF HOIST CYL.

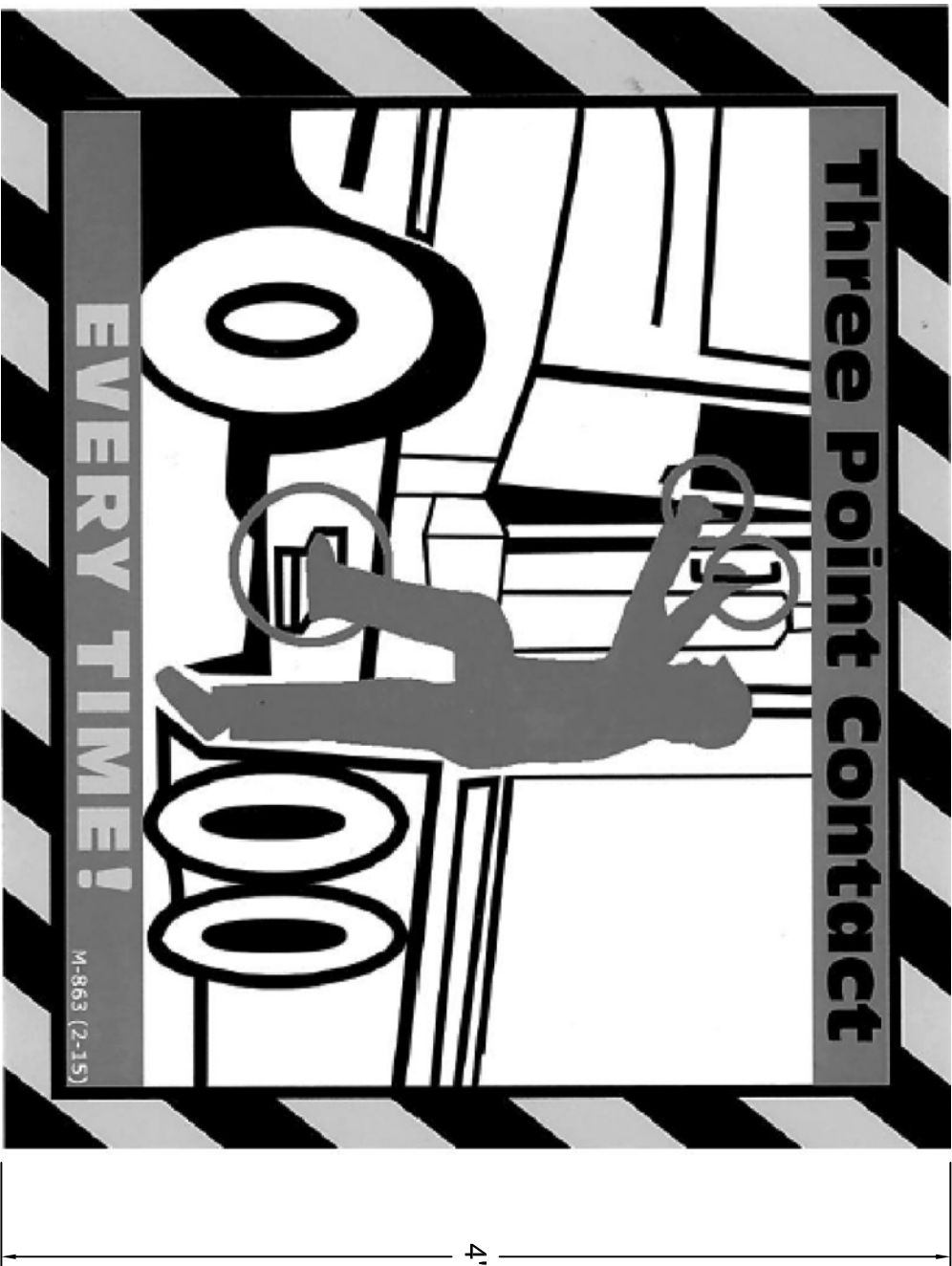
13. DEPENDING ON APPLICATION, ALL REAR SUSPENSION, TRUNIONS, LEAF SPRINGS

## PA DEPARTMENT OF TRANSPORTATION

REVISIONS		CENTRALIZED LUBE SYSTEM GENERIC ARRANGEMENT	
NO.	DATE	BY	SCALE
1	12-15-00	GAH	N/A
2	01-02-07	CJW	N/A
3	06-09-09	TOD	N/A
4			
5			

DRAWN BY	GAH	SCALE	EQU-501
DATE	8-31-99	CHK'D BY	LHA
		SHEET 2 OF 2	





THERE SHALL BE A PERMANENT DECAL AFFIXED ON EACH DOOR. THE SAME PERMANENT DECAL SHALL BE AFFIXED BY EACH BODY LADDER. MEASUREMENTS OF DECAL ARE REFERENCED ABOVE.

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS			THREE POINTS OF CONTACT STICKER		
NO.	DATE	BY	DRAWN BY	SCALE	EQN-552-1
1	12-20-16	JJB	GAW	N/A	
2					
3					

M-863 (2-15)