Bulletin No. 13-11

June 2011

Instructions for mounting skid Centennial Distributor To Truck

E.D. ETNYRE & CO., Oregon, Illinois 61061
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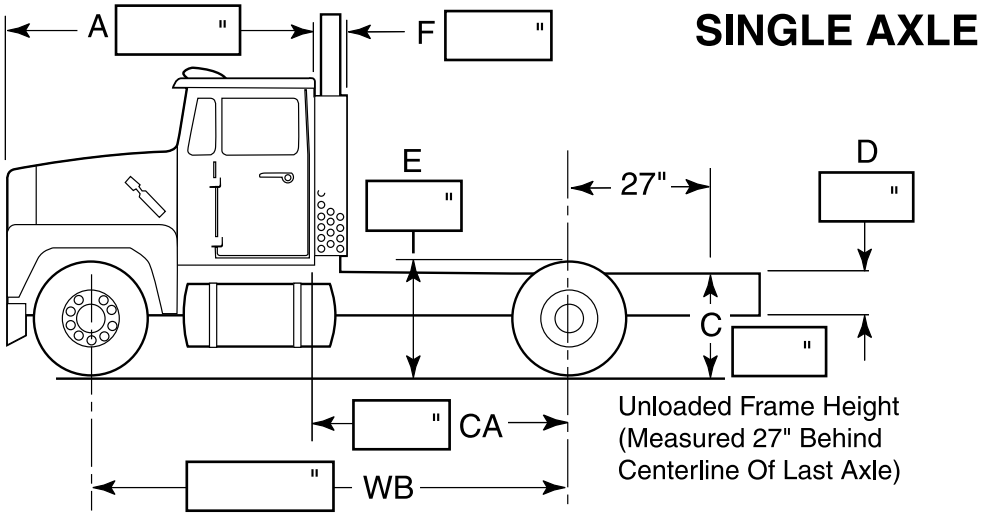
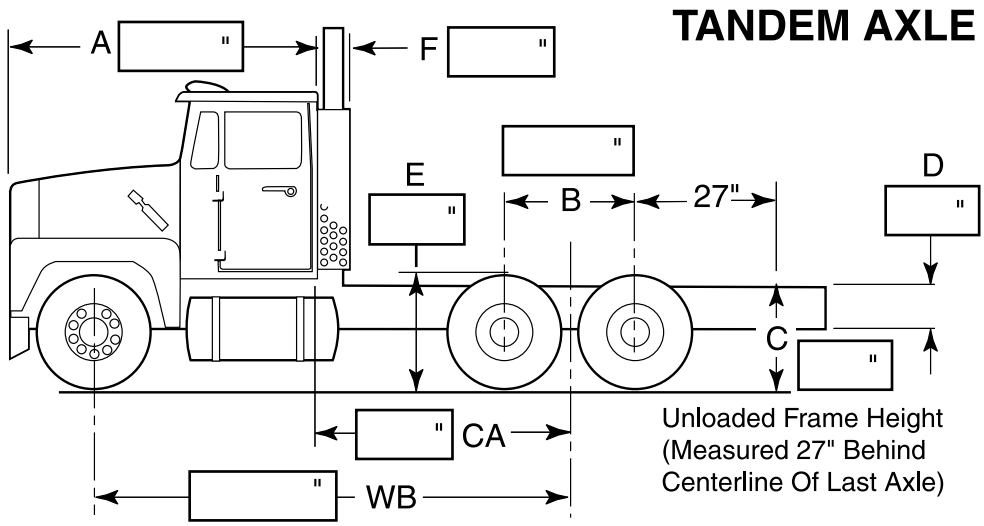
Truck Information
Centennial Model Distributors

To insure proper fit of distributor to chassis, the following information must be provided. We cannot process your order without this information.

Customer _____





Transmission Make and Model (if PTO drive) _____

PTO Location (if PTO drive) ☐ Curbside ☐ Driver's Side

E. D. ETNYRE & CO.
1333 South Daysville Road Oregon, Illinois 61061-9778
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Instructions For Mounting Hydraulic Components To Chassis And Start-Up

See Drawings 9300218 & 9301340 For Tank Mounting Instructions

IMPORTANT

When working with hydraulic components, cleanliness is of he utmost importance

Please refer to Figures 1 through 5 and pages 4 through 10 to clarify the following instructions.

STEP 1: Mark saddle locations on truck frame by acquiring measurements from distributor tank.

STEP 2: Install power take-off (if applicable) on predetermined side of truck transmission.

NOTE: Power take-off rotation must agree with hydraulic pump rotation, engine rotation PTO for right hand hydraulic pump and opposite rotation PTO for left hand hydraulic pump. If pump rotation is wrong, consult factory or authorized Sundstrand dealer.

STEP 3: Mount the hydraulic pump. (Refer to the following illustrations as necessary.)

Crankshaft Driven 42 Series pump	Ref. 25, page 6
Crankshaft Driven 90 Series pump	Ref. 18, page 7
PTO Driven 42 Series pump	Ref. 33, page 8
PTO Driven 90 Series pump	Ref. 33, page 10

Crankshaft driven units mount pump using pump mounting channel (Ref. 9, page 6 or Ref. 14, page 7).

PTO driven units mount pump using hangars (Ref. 29, page 8 or 10) and stabilizing rod (Ref. 28 page 8 or 10) making sure that hanger does not conflict with location of saddles on distributor (See step 1). Maintain as much ground clearance as possible.

The centerline of the pump shaft should be parallel with the centerline of the engine crankshaft or the PTO shaft. The angles of the universal joints should not exceed 6 degrees. See Figure 1.

STEP 4: Install drive line between crankshaft or power take-off and the hydraulic pump. When the required length is determined, the drive tube must be cut to suit and the weld yokes must be welded to the tube. (Figure 1). Note: Driveline must be dynamically balanced before installation.

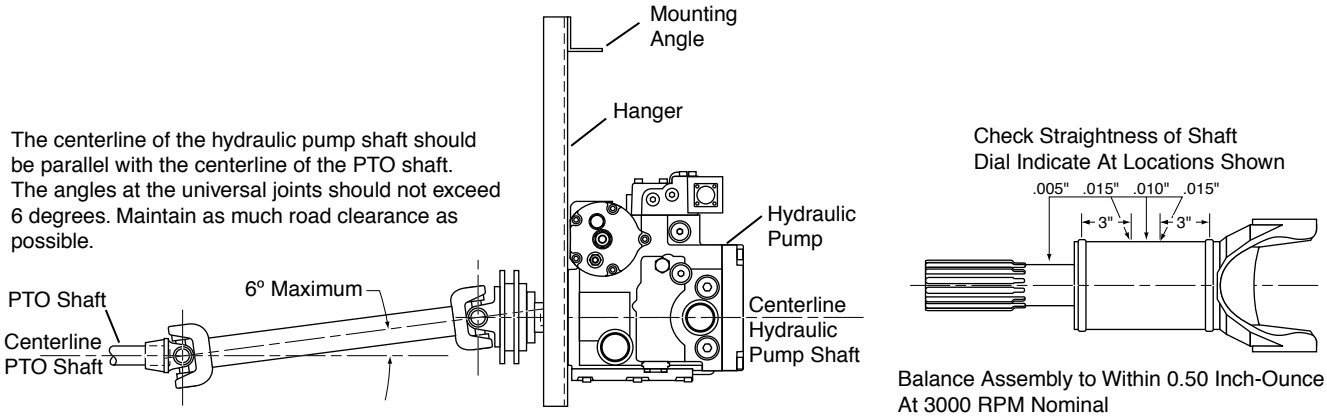


Figure 1 Driveline

All Drive Lines Should Be Straightened And Balanced. The Shaft To Shaft Dimension Should Not exceed 60" (50" Tube Length) On A Normal Basis

STEP 5: Install the Cab Control Panel. (See Figure 6).

STEP 6: Pipe the Hydraulic system. See pages 6 and 8 for 42 Series pumps and pages 7 and 10 for 90 Series pumps.

⚠ CAUTION

All hydraulic lines should be secured clear of wear points, sharp projections, heat sources, etc.

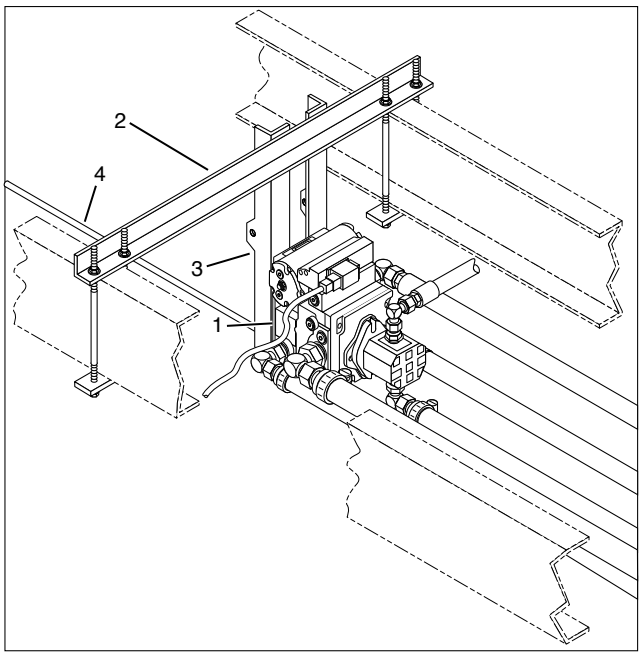


Figure 2. Hydrostatic Pump

1. Hydrostatic Pump 2. Mounting Angle
3. Pump Hanger 4. Stabilizing Rod

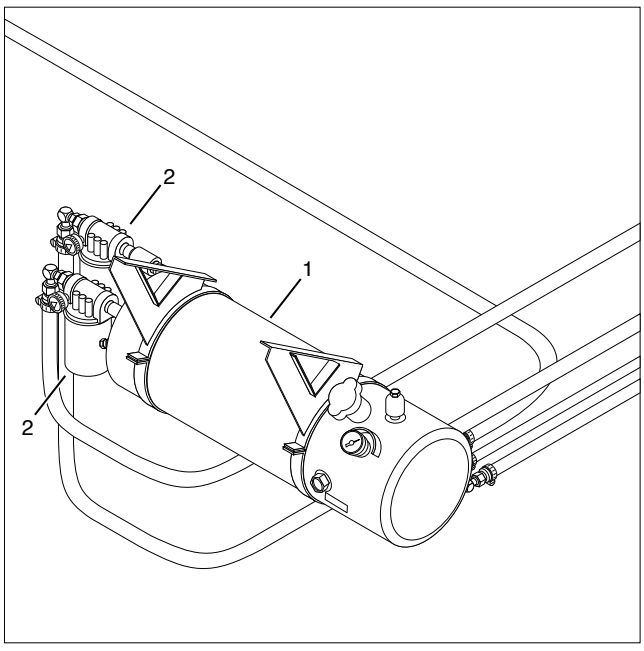


Figure 3. Hydraulic Tank And Filters

1. Hydraulic Tank 2. Filters

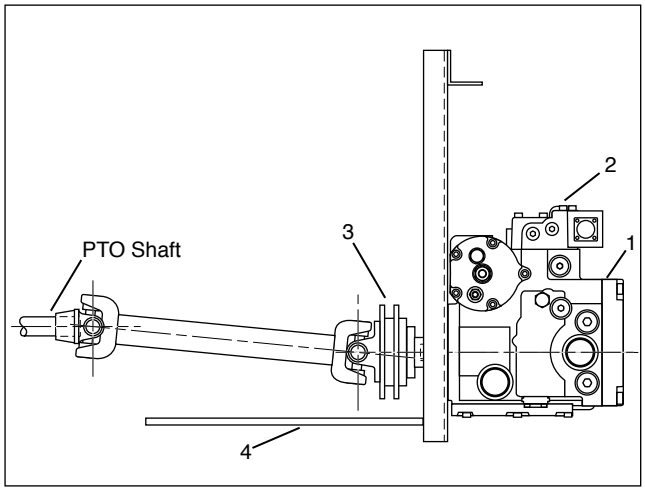


Figure 4. PTO Driven Pump
42 Series Pump Shown

1. Hydrostatic Pump2. Electronic Pump Control
3. Driveline Adapter 4. Stabilizing Rod

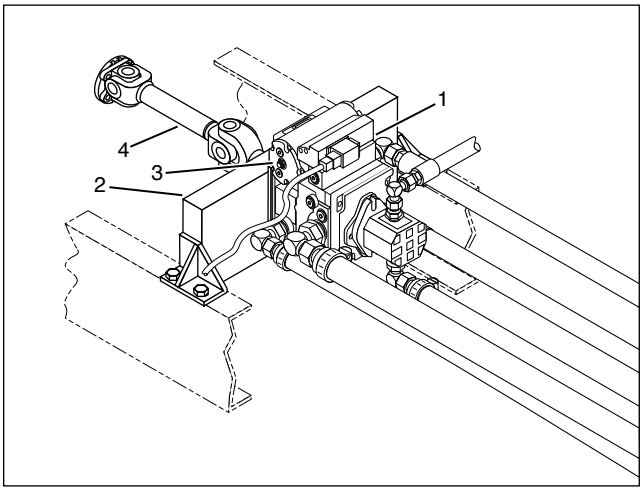
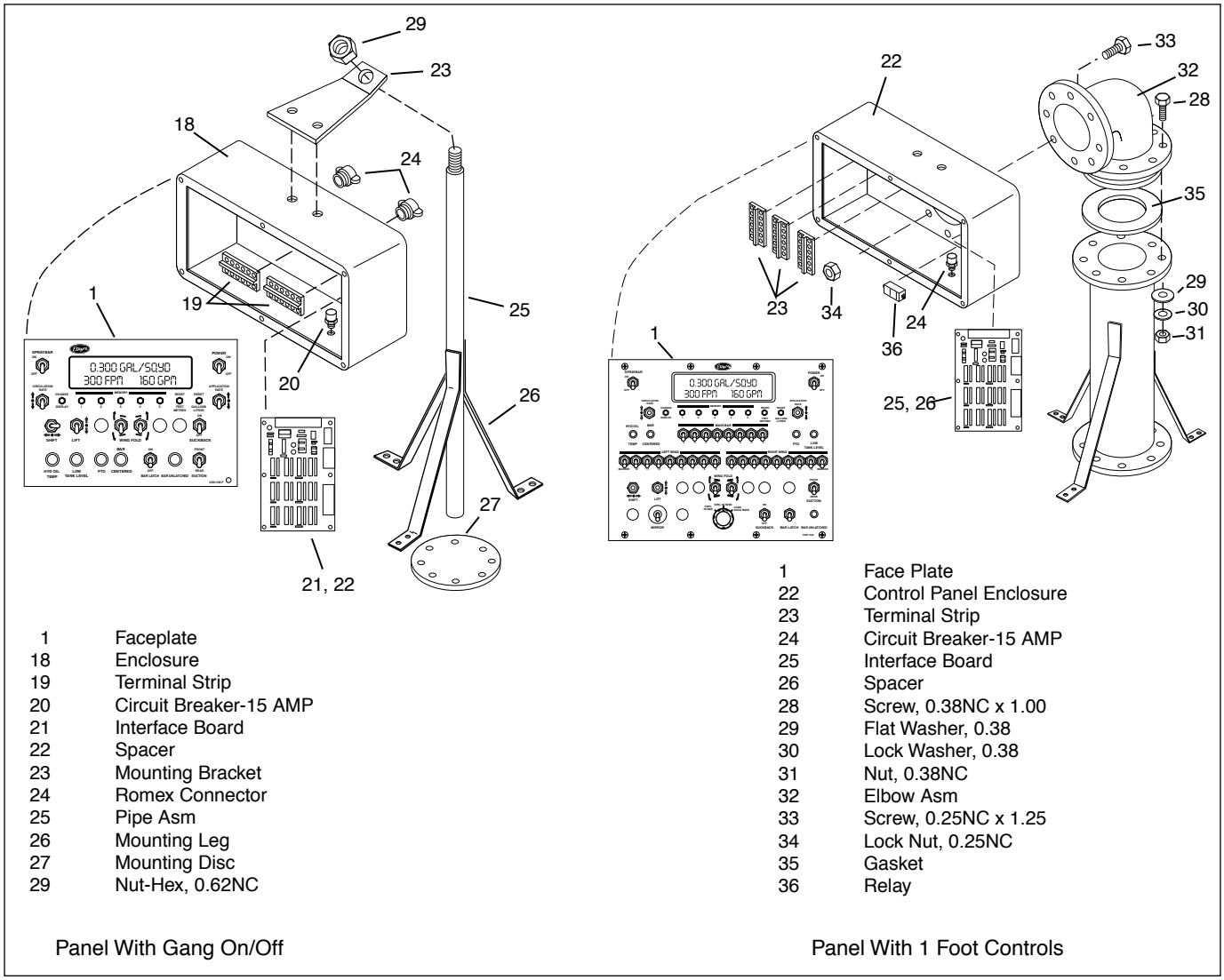


Figure 5. Crankshaft Driven Pump
42 Series Pump Shown

1. Hydrostatic Pump2. Mounting Channel
3. Null Adjustment Screw 4. Driveshaft From Crankshaft



1	Faceplate
18	Enclosure
19	Terminal Strip
20	Circuit Breaker-15 AMP
21	Interface Board
22	Spacer
23	Mounting Bracket
24	Romex Connector
25	Pipe Asm
26	Mounting Leg
27	Mounting Disc
29	Nut-Hex, 0.62NC

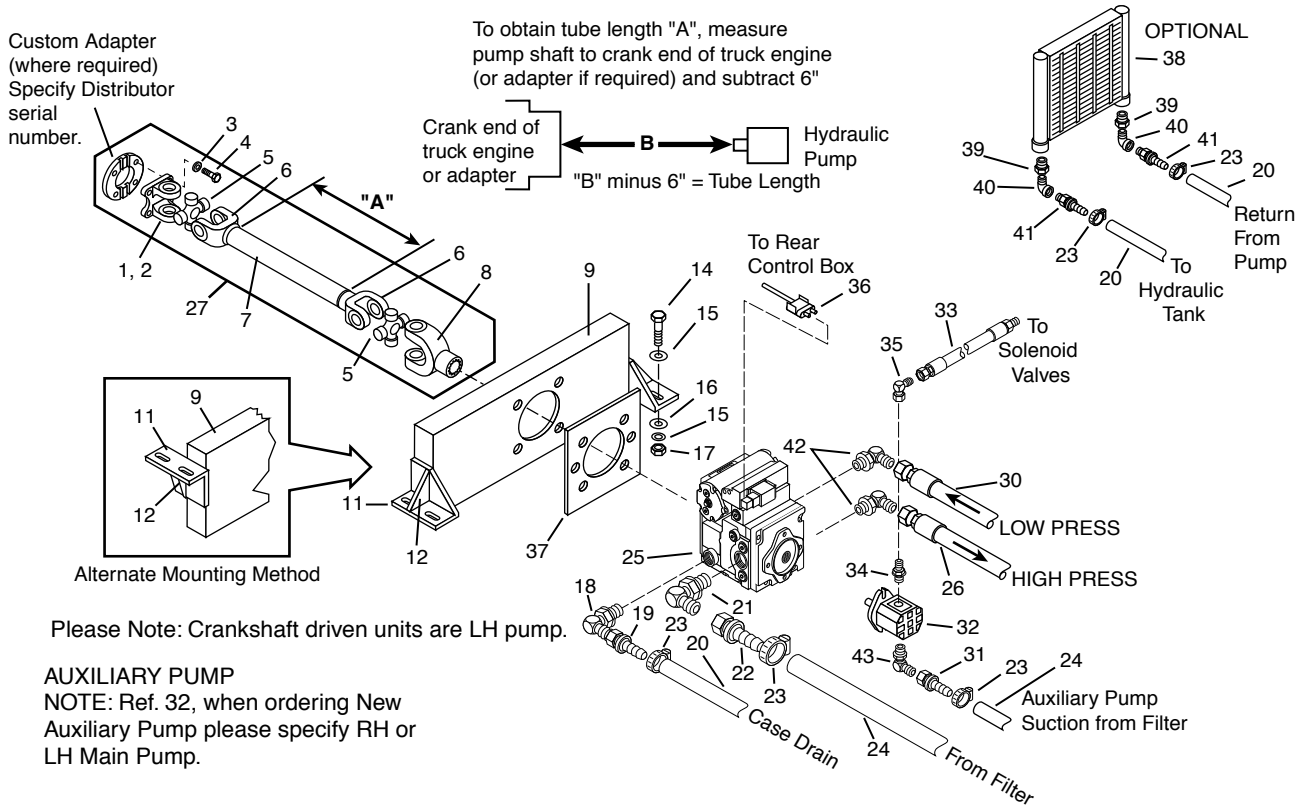
Panel With Gang On/Off

1	Face Plate
22	Control Panel Enclosure
23	Terminal Strip
24	Circuit Breaker-15 AMP
25	Interface Board
26	Spacer
28	Screw, 0.38NC x 1.00
29	Flat Washer, 0.38
30	Lock Washer, 0.38
31	Nut, 0.38NC
32	Elbow Asm
33	Screw, 0.25NC x 1.25
34	Lock Nut, 0.25NC
35	Gasket
36	Relay

Panel With 1 Foot Controls

Figure 6. Control Panels In Truck Cab

Hydraulic Pump Drive - Crankshaft Driven
42 Series Pump

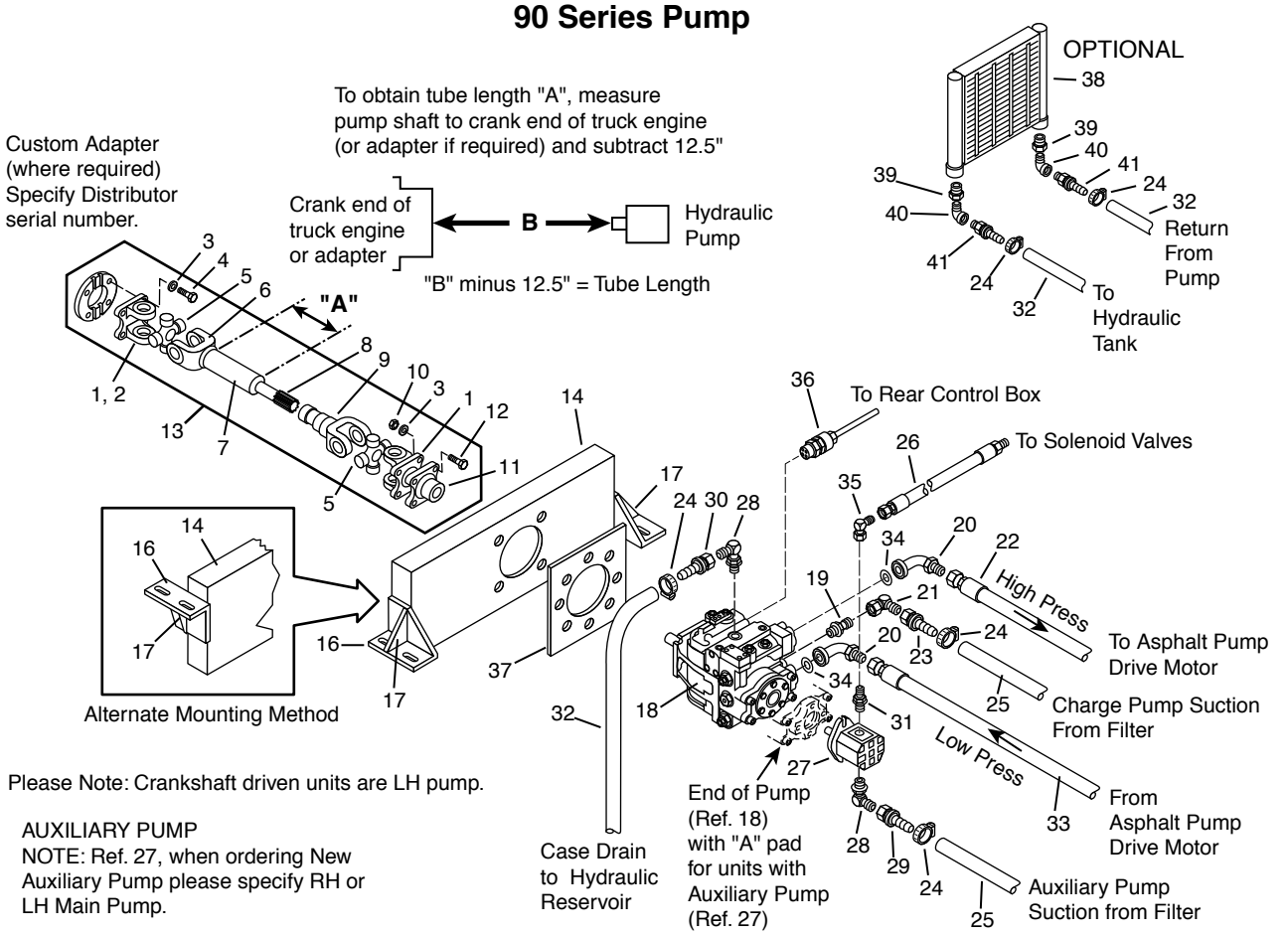


REF	PART NO.	QTY	DESCRIPTION
1	6440172	1	Yoke-Flange, 2.75 Male Pilot
2	3170021	1	Yoke-Flange, 2.38 Male Pilot
3	0120382	4	Lock Washer, 0.38, Spring, PD
4	0454904	4	Hex Screw, 0.38NC x 0.75, GR8, PD
5	3170013	2	Journal & Bearing
6	6440164	2	Yoke
7	6303278	AR	Tube-2.00 x 14 Ga.
8	6440200	1	Yoke-End, 1.00, 15T
9	3321423	1	Mtg. Channel
11	3321424	1	Angle, LH
	3321426	1	Angle, RH
12	3321332	2	Gusset
14	0122459	4	Hex Screw, 0.50NC x 2.00, GR2, PD
15	0120390	4	Flat Washer, 0.50A, W, PD
16	0120384	4	Lock Washer, 0.50, Spring, PD
17	0120378	4	Nut, 0.50NC, PD
18	6602456	1	Hyd Elbow, 90, 16MB-12MJ
19	6600648	1	Hose End-12 x 12FJX, ST, Push Lock
20	6600646	AR	Hose-Self Grip
21	6601568	1	Hyd Elbow, 90, 16MB-16MJ
22	6601566	1	Hose End, 16FJX-16, ST
23	6000792	AR	Hose Clamp, Worm Drive, 1.06 to 2
24	6601564	AR	Suction Hose, 1.00 ID, SAE 100R4
25	6603242	1	Pump-3.1 CI,RH,EDC,Spline,A Pad
	6603243	1	Pump-3.1 CI,LH,EDC,Spline,A Pad
26	9250610	AR	Hyd Hose Asm, HP (Specify Length)
27	9301275	1	Drive Line Asm
28	0120377	4	Nut, 0.38NC
29	0186679	4	Hex Screw, 0.38NC x 1.25, GR8
30	9250611	1	Hose Asm, LP, 12FJX-12FJX (Specify Lg)
31	6601812	1	Hose End, 12FJ, 1.00 Hose
32	6602390	1	Hyd Pump, 0.68CI, A Pad, Spline, LH
	7420255	1	Seal Kit
33	9250612	1	Hose Asm, LP (Specify Length)
34	6600903	1	Hyd Adapter, ST, 08MJ-10MB
35	9410281	1	Hyd Elbow, 90, 08FJX-08MJ
36	3370337	1	Cable Asm - Pump Stroker, 42 Series
37	3321414	1	Adapter
38	6600880	1	Oil Cooler
39	0128003	2	Pipe Bushing-1.00 x 0.75NPT
40	0141621	2	Pipe Elbow, 90, ST, 0.75NPT
41	6600647	2	Hose End, 12 x 12MP, ST, LPSP
42	6602586	2	Elbow-Hyd, 90, 12MB-16MJ
43	9410979	1	Elbow-Hyd, 90, 12MB-12MJ

AR = As Required

Specify Unit Serial No., Part No., & Part Description

Hydraulic Pump Drive - Crankshaft Driven
90 Series Pump



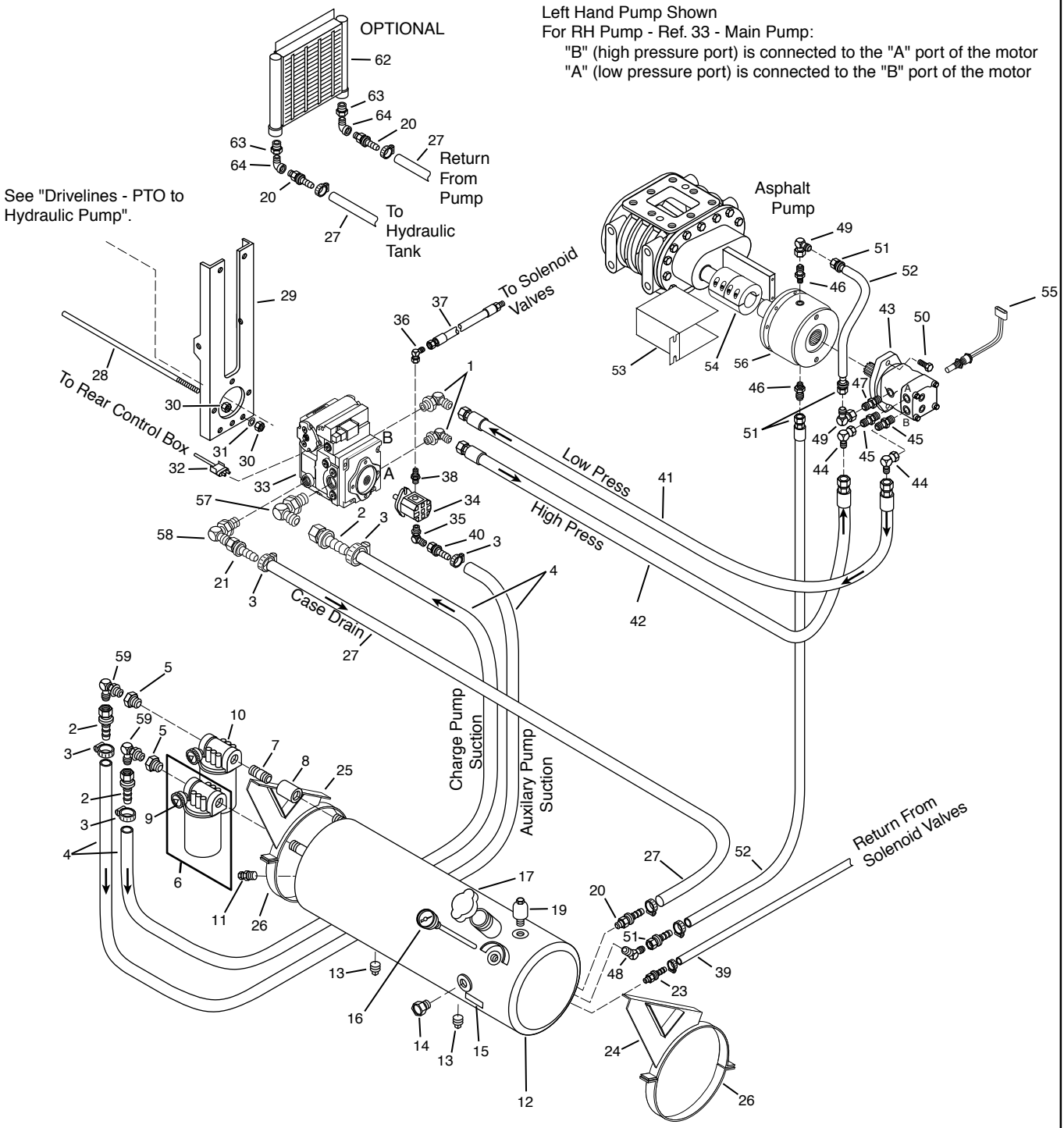
Please Note: Crankshaft driven units are LH pump.

AUXILIARY PUMP
NOTE: Ref. 27, when ordering New Auxiliary Pump please specify RH or LH Main Pump.

REF	PART NO.	QTY	DESCRIPTION
1	3170021	1	Yoke-Flange, 2.38 Male Pilot
2	6440172	1	Yoke-Flange, 2.75 Male Pilot
3	0120382	8	Lock Washer, 0.38, Spring, PD
4	0454904	4	Hex Screw, 0.38NC x 0.75, GR8, PD
5	3170013	2	Journal & Bearing
6	6440164	1	Yoke
7	6303278	AR	Tube-2.00 x 14 Ga. (Specify Length)
8	6440199	1	Shaft
9	3110034	1	Yoke Sleeve
10	0120377	4	Nut, 0.38NC, PD
11	6440162	1	Flange Companion
12	0186679	4	Hex Screw, 0.38NC x 1.25, GR8, PD
13	9301215	1	Drive Line Asm
14	3321422	1	Mtg. Channel
16	3321424	1	Angle, LH
	3321426	1	Angle, RH
17	3321332	2	Gusset
18	6603241	1	Pump-4.57, LH, Ele., A Pad
	6603240	1	Pump-4.57, RH, Ele., A Pad
	7010097	1	A Pad Asm Complete
	7010092	1	Seal Kit (Both Pumps)
	7010096	1	Electronic Stroker (Both Pumps)
19	9410233	1	Hyd Adapter, ST, 16MB-16MJ
20	6601045	2	Hyd Elbow, 90, 16FL-16MJ
21	9410285	1	Hyd Elbow, 90, 16FJX-16MJ
22	9250610	1	Hose Asm-HP (Specify Length)
23	6601566	2	Hose End, 16FJX-16, ST
24	6000792	6	Hose Clamp, Worm Drive, 1.06 to 2
25	6601564	AR	Suction Hose, 1.00 ID
26	9250612	1	Hose Asm-LP (Specify Length)
27	6602390	1	Pump, 0.68CI, A Pad, Spline, LH
	7420255	1	Seal Kit
28	9410979	2	Hyd Elbow, 90, 12MB-12MJ
29	6601812	1	Hose End, 12FJ-1" Hose
30	6600648	AR	Hose End, 12 x 12FJX, ST, Push Lock
31	6600903	1	Hyd Adapter, ST, 08MJ-10MB
32	6600646	AR	Hose-Self Grip (Specify Length)
33	9250611	1	Hose-LP, 12FJX-12FJX (Specify Lgth)
34	0274253	2	O Ring Tube, Fitting, 1.50
35	9410281	1	Hyd Elbow, 90, 08FJX-08MJ
36	3370185	1	Cable Asm-Pump Stroker
37	3321414	1	Adapter
38	6600880	1	Oil Cooler
39	0128003	2	Pipe Bushing-1.00 x 0.75NPT
40	0141621	2	Pipe Elbow, 90, ST, 0.75NPT
41	6600647	2	Hose End, 12 x 12MP, ST, LPSP

AR - As Required

Hydrostatic Drive System - PTO Driven
42 Series Pump



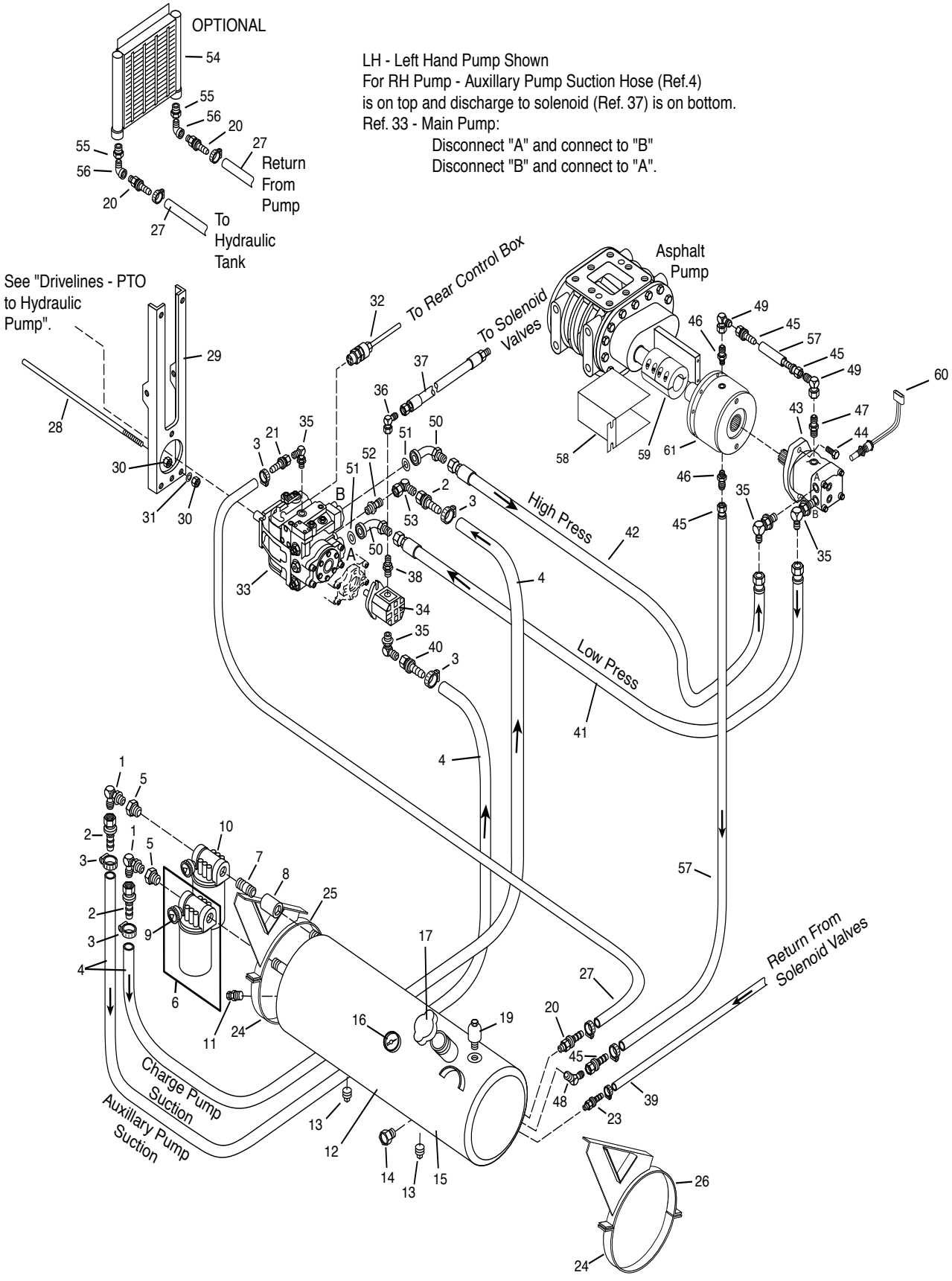
Specify Unit Serial No., Part No., & Part Description

Hydrostatic Drive System - PTO Driven
42 Series Pump

REF	PART NO.	QTY	DESCRIPTION
1	6602586	2	Elbow-Hyd, 90, 12MB-16MJ
2	6601566	3	Hose End, 16-16FJX, ST
3	6000792	3	Clamp-Hose, Worm Dr., 1.06 to 2
4	6601564	AR	Suction Hose, 1" ID
5	0215915	1	Pipe Bushing, 1.25 x 1.00 NPT
6	6602214	1	Vacumn Filter, 10 Micron
	7420244	1	Replacement Element
7	0219357	1	Nipple-1.25 x 2.00, CL
8	0144066	1	Pipe Coupling, 1.25 NPT
9	7420042	2	Indicator
10	6601571	1	Return Line Filter, 1.25 NPT
	7420219	1	Element, 10 Micron
11	6600237	1	Thermo Switch
12	3321386	1	Hyd Tank Asm, 12" x 55"
	3321905	1	Hyd Tank Asm, 14" x 40"
13	0219301	4	Plug-Pipe, SqHd, 0.75 NPT
14	6600224	1	Eyesite Oil Plug
15	3390605	1	Oil Spec. Instruction Plate
16	6500039	1	Thermometer-2" Dial, 9" Dual
17	3330026	1	Cap
18	6000233	1	Gasket-2.18", Leather
19	6600223	1	Breather
20	6600647	1	Hose End-12 x 12MP, ST, LPSP
21	6600648	3	Hose End-12 x 12FJX
22	9402828	1	Elbow-Hyd, 45, 12MJ-12MP
23	6600663	1	Hose End-08 x 08MP, ST, LPSP
24	3311035	2	Band-12" Tank
	3311022	2	Band-14" Tank
25	3380853	1	Brkt Asm-Tank, LH, 12"
	3380855	1	Brkt Asm-Tank, LH, 14"
26	3380854	1	Brkt Asm-Tank, RH, 12"
	3380856	1	Brkt Asm-Tank, RH, 14"
27	6600646	2	Self Grip Hose, 0.75 (Specify Length)
28	6303119	1	Round-0.50 CR
29	3321374	1	Support-Pump, 40 Series
30	0120378	2	Nut-Hex, 0.50 NC
31	0120384	2	Lock Washer, 0.50
32	3370337	1	Cable Asm-Pump Stroker, 42 Series
33	6603242	1	Pump-3.1 CI,RH,EDC,Spline,A Pad
	6603243	1	Pump-3.1 CI,LH,EDC,Spline,A Pad
34	6602390	1	Aux Pump, 0.68 CI, A Pad, Spline, LH
	6602391	1	Aux Pump, 0.68 CI, A Pad, Spline, RH
	7420255	1	Seal Kit (6602390 & 6602391)
35	9410979	2	Elbow-Hyd, 90, 12MB-12MJ
36	9410281	1	Elbow-Hyd, 90, 08FJX-08MJ
37	9250612	1	Hose Asm-LP (Specify Length)
38	6600903	1	Adapter-Hyd, ST, 08MJ-10MB
39	6600662	1	Hose-Push Lock, 0.50 (Specify Length)
40	6601812	1	Hose End, 16-12FJX, ST
41	9250611	1	Hose Asm-LP, 12FJX-16FJX (Specify Length)
42	9250610	1	Hose Asm-HP (Specify Length)
43	6603157	1	Motor-1.53 CIR,w/Loop Flush
44	9410283	2	Elbow-Hydr,90,12FJX-12MJ
45	6600910	2	Adapter-Hydr,St,10MB-12MJ
46	6603043	2	Adapter-Hydr,St,08MJ-04BSPP
47	9410203	1	Adapter-Hydr,St,08MJ-08MB
48	6602170	1	Elbow-Hyd, 45,08MJ-08MP
49	9410281	2	Elbow-Hyd, 90,08FJX-08MJ
50	0180175	2	Screw-Hex,1/2NC x 1 1/4,Gr 5
51	6600664	2	Hose End-08-08FJX, ST
52	6600662	1	Hose-0.50
53	3390716	1	Guard
54	6445090	1	Coupling
55	3370323	1	Speed Pickup
56	6410079	1	Gearbox-Planetary
57	6601568	1	Elbow-Hyd, 90, 16MB-16MJ
58	6602456	1	Elbow-Hyd, 90, 16MB-12MJ
59	6601135	2	Elbow-Hyd, 90, 16MP-16MJ

AR = As Required

Hydrostatic Drive System - PTO Driven
90 Series Pump



Specify Unit Serial No., Part No., & Part Description

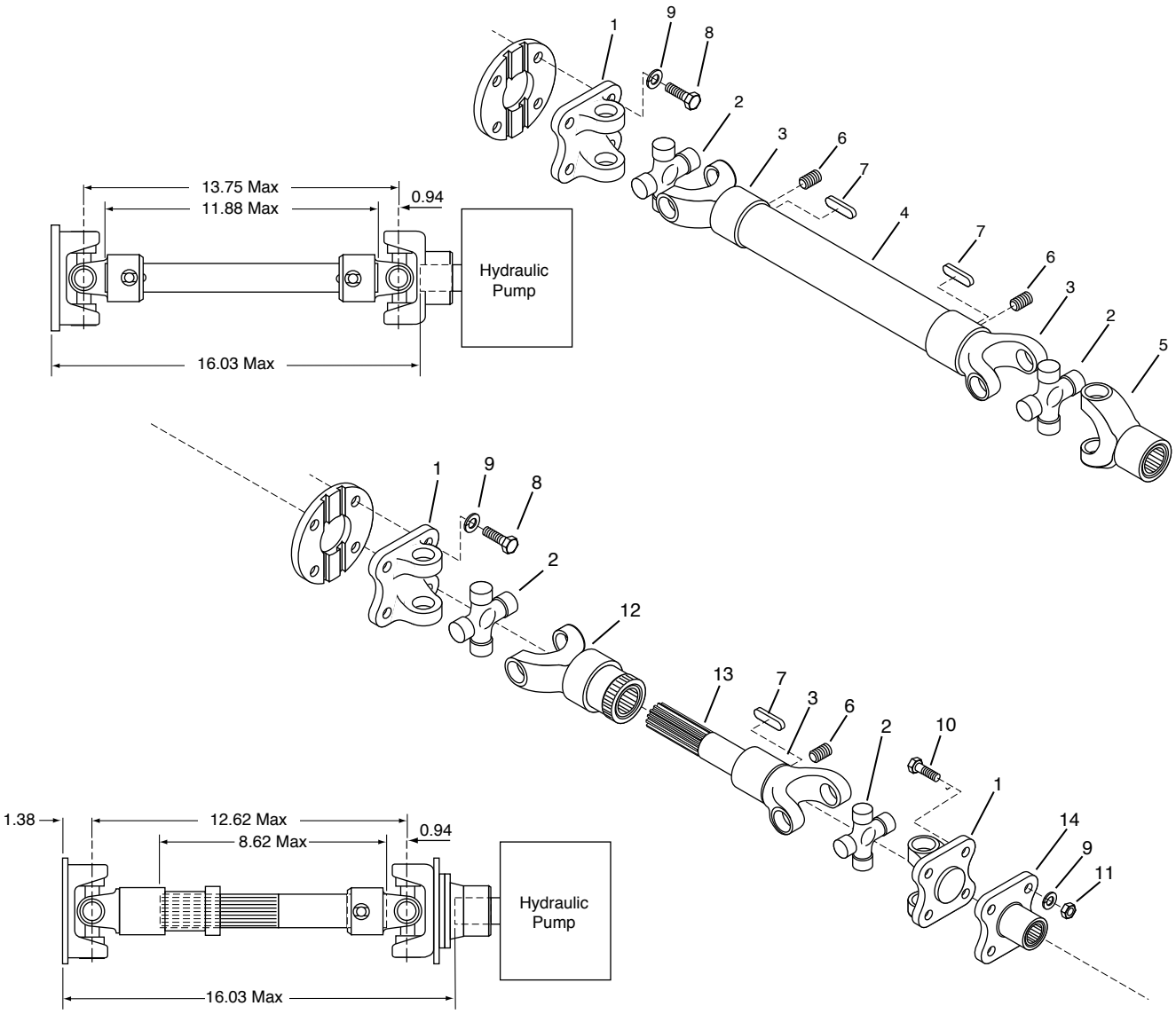
Hydrostatic Drive System - PTO Driven
90 Series Pump

REF	PART NO.	QTY	DESCRIPTION
1	6601135	2	Elbow-Hyd, 90, 16MP-16MJ
2	6601566	3	Hose End, 16-16FJX, ST
3	6000792	3	Clamp-Hose, Worm Dr., 1.06 to 2
4	6601564	AR	Hose-Suction, 1" ID
5	0215915	1	Bushing-Pipe, 1.25 x 1.00 NPT
6	6602214	1	Filter-Vacumn, 10 Micron
	7420244	1	Replacement Element
7	0219357	1	Nipple-1.25 x 2.00, CL
8	0144066	1	Coupling-Pipe, 1.25 NPT
9	7420042	1	Indicator
10	6601571	1	Filter-Return Line, 1.25 NPT
	7420219	1	Element-Filter, 10 Micron
11	6600237	1	Switch-Thermo
12	3321386	1	Tank Asm-Hyd, 12" x 55"
	3321905	1	Tank Asm-Hyd, 14" x 40"
13	0219301	4	Plug-Pipe, SqHd, 0.75 NPT
14	6600224	1	Plug-Eyesite, Oil
15	3390605	1	Plate-Instruction, Oil Specifications
16	6500039	1	Thermometer-2" Dial, 9" Dual
17	3330026	1	Cap-Filler, Hydraulic Tank
18	6000233	1	Gasket-2.18", Leather
19	6600223	1	Breather-Hydraulic Tank
20	6600647	1	Hose End-12 x 12MP, ST, LPSP
21	6600648	3	Hose End-12 x 12FJX
22	9402828	1	Elbow-Hyd, 45, 12MJ-12MP
23	6600663	1	Hose End-08 x 08MP, ST, LPSP
24	3311035	2	Band-12" Tank
	3311022	2	Band-14" Tank
25	3380853	1	Brkt Asm-Tank, LH, 12"
	3380855	1	Brkt Asm-Tank, LH, 14"
26	3380854	1	Brkt Asm-Tank, RH, 12"
	3380856	1	Brkt Asm-Tank, RH, 14"
27	6600646	2	Hose-Self Grip, 0.75 (Specify Length)
28	6303119	1	Round-0.50 CR
29	3321323	1	Support-Pump, 90 Series
30	0120378	2	Nut-Hex, 0.50 NC
31	0120384	2	Washer-Lock, 0.50
32	3370185	1	Pump Stroker Cable Asm
33	6603241	1	Pump-4.57, LH, Ele., A Pad
	6603240	1	Pump-4.57, RH, Ele., A Pad
	7010097	1	A Pad Asm-Comp. (6602754 & 6602755)
	7010092	1	Seal Kit (All Pumps)
	7010096	1	Electronic Stroker (All Pumps)
34	6602390	1	Pump-Aux, 0.68 CI, A Pad, Spline, LH
	6602391	1	Pump-Aux, 0.68 CI, A Pad, Spline, RH
	7420255	1	Seal Kit
35	9410979	3	Elbow-Hyd, 90, 12MB-12MJ
36	9410281	1	Elbow-Hyd, 90, 08FJX-08MJ
37	9250612	1	Hose Asm-LP (Specify Length)
38	6600903	1	Adapter-Hyd, ST, 08MJ-10MB
39	6600662	1	Hose-Push Lock, 0.50 (SpecifyLength)
40	6601812	1	Hose End, 16-12FJX, ST
41	9250611	1	Hose Asm-LP, 12FJX-16FJX (Specify Length)
42	9250610	1	Hose Asm-HP (Specify Length)
43	6603219	1	Motor-Motor-2.69 CI,w/Loop Flush
44	0180175	2	Screw-Hex,1/2NC x 1 1/4,Gr 5
45	6600664	4	Hose End-8FJX, ST
46	6603043	2	Adapter-Hydr,St,08MJ-04BSPP
47	9410203	1	Adapter-Hydr,St,08MJ-08MB
48	6602170	1	Elbow-Hyd, 45,08MJ-08MP
49	9410281	2	Elbow-Hyd, 90,08FJX-08MJ
50	6601045	2	Elbow-Hyd, 90, 16FL-16MJ
51	0274253	2	"O" Ring Tube Fitting, 1.50
52	9410233	1	Adapter-Hyd , ST, 16MB-16MJ
53	9410285	1	Elbow-Hyd, 90, 16FJX-16MJ
54	6600880	1	Cooler-Oil
55	0128003	2	Bushing-Pipe, 1.00 x 0.75NPT
56	0141621	2	Elbow-Pipe, 90, ST, 0.75NPT
57	6600662	1	Hose-0.50
58	3390716	1	Guard
59	6445090	1	Coupling
60	3370323	1	Speed Pickup
61	6410079	1	Gearbox-Planetary

AR = As Required

Drive Line - PTO To Hydraulic Pump - GMC Trucks

42 Series and 90 Series Hydraulic Pumps



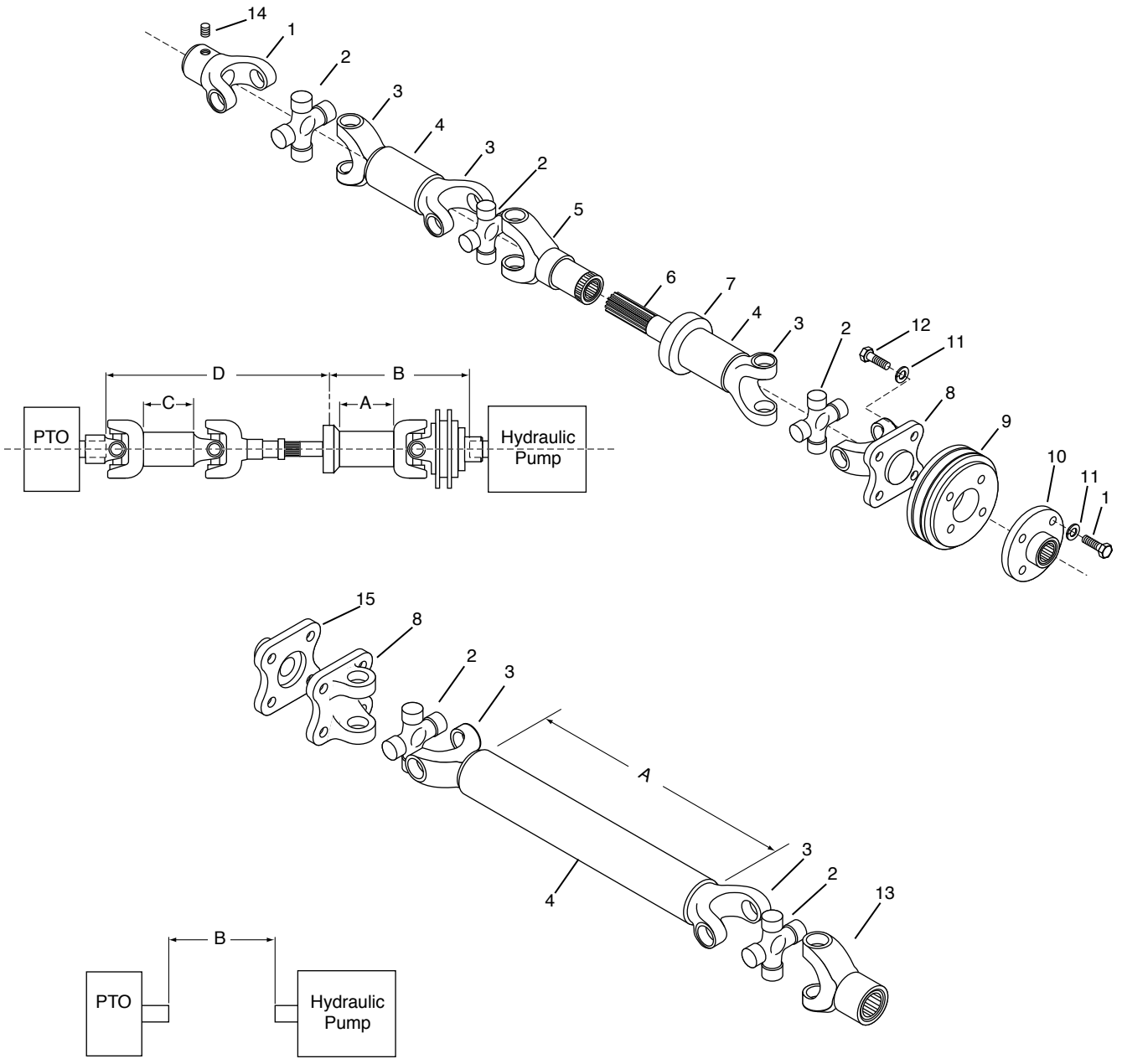
REF	PART NO.	QTY	DESCRIPTION
1	3170021	AR	Yoke-Flange
2	3170013	2	Journal & Bearing Kit
3	6440170	AR	End Yoke-1.25" Bore
4	3321431	1	Shaft (40 Series)
5	6440200	1	End Yoke, Splined
6	0102615	AR	Screw-Sock, 0.50NC x 0.50Lg, Cup Pt.
7	6000161	AR	Key-0.31 x 0.31 x 1.50 Lg.
8	0454904	4	Screw-Hex, 0.38NC x 0.75, GR8,PD
9	0120382	AR	Washer-Lock, 0.38
10	0186679	4	Screw-Hex, 0.38NC x 1.25, GR8,PD
11	0120377	4	Nut-Hex, 0.38NC,PD
12	6440165	1	Yoke Asm, Splined
13	3321429	1	Shaft (90 Series)
14	6440162	1	Flange Companion, Tapered

AR = As Required

Specify Unit Serial No., Part No., & Part Description

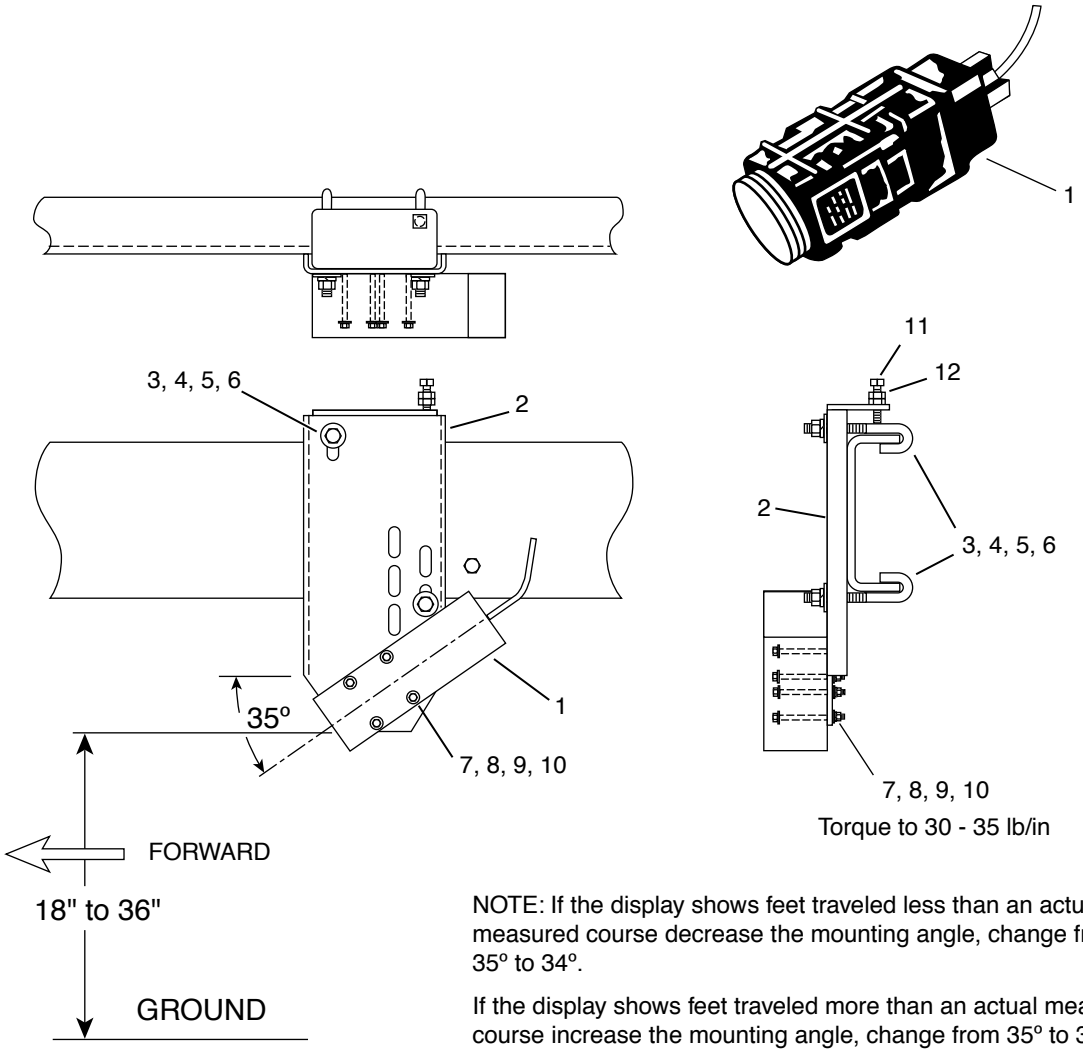
Drive Line - PTO To Hydraulic Pump

Units with 42 Series Hydraulic Pumps



REF	PART NO.	QTY	DESCRIPTION	REF	PART NO.	QTY	DESCRIPTION
1	6440170	1	Yoke-End	9	3321014	1	Pulley
2	3170013	AR	Journal & Bearing	10	6440206	1	Flange-Companion
3	6440164	AR	Yoke-Stub	11	0120382	8	Washer-Lock, 0.38
4	6303278	AR	Tubing-2"OD x 14GA(Specify Length)	12	0186679	12	Screw-Hex, 0.38NC x 1.25, GR8,PD
5	6440165	1	Yoke Asm	13	6440200	1	Fitting-Yoke
6	6440166	1	Shaft-Stub	14	6100284	1	Screw-Sock, 0.50NC x 0.50 Lg.
7	6440167	1	Bearing	15	6440213	1	Flange-Companion Rect 1.25 Dia 240
8	3170021	2	Yoke-Flange				

Radar Speed Sensor Installation



Torque to 30 - 35 lb/in

NOTE: If the display shows feet traveled less than an actual measured course decrease the mounting angle, change from 35º to 34º.

If the display shows feet traveled more than an actual measured course increase the mounting angle, change from 35º to 36º.

One degree change in angle changes the readout approximately one percent.

REF	PART NO.	QTY	DESCRIPTION	REF	PART NO.	QTY	DESCRIPTION
1	3370212	1	Speed Sensor Radar Head, W/O Plug				
	7530050	1	Kit - Window Cover				
	PD10253	1	Decal-Warning				
2	3361236	1	Mounting Plate Asm				
3	3360726	2	Hook Bolt				
4	0121574	2	Lock Washer-0.62				
5	0124589	2	Nut-0.62NC				
6	0130999	2	Flat Washer-0.62				
7	0432903	4	Screw-0.25NC x 4.00				
8	0120386	8	FlatWasher-0.25				
9	9413946	4	Lock Nut-0.25NC				
10	3370254	4	Spacer				
11	0110456	1	Screw, SqHd-0.50NC x 3.00				
12	0120378	1	Nut-0.50NC				

Hydrostatic Pump Drive Start-Up Procedure

When starting the hydraulic system on a distributor, the following procedure must be followed.

This procedure will help to avoid cavitating the pump causing scoring of moving parts within the pump. Extra care at the crucial start up time will assure a long, trouble free life of the pump.

The hydraulic pump should not be run, even "for a little while" without being sure that there is oil in the case and in the charge pump.

Jog the drive shaft by bumping the clutch on PTO driven units or by the engine starter on crank driven units. On engines with automatic transmissions and PTO drives, start the engine with the transmission in neutral. Set the parking brake. Shift the transmission into "Drive" and engage the PTO. Shift the transmission into and out of neutral quickly while someone checks the PTO rotation.

Check to see that the plumbing matches the direction of rotation of the hydraulic pump drive shaft per instructions in Step 2, page 3.

Loosen the fitting on the case drain port and check for oil. (see Figure 7, page 16)

Fill the tank to the sight glass with hydraulic oil.

If oil comes out of the charge pump inlet port, tighten that fitting securely.

If oil comes out of the loosened fitting at the charge pump case drain port, tighten that fitting securely.

If oil does not come out of the charge pump inlet port and the case drain port, it will be necessary to pressurize the hydraulic tank. Install the necessary fittings and an air pressure regulator on the threaded fill neck of the hydraulic tank.

Apply air at 10 psi to the hydraulic tank. This will force hydraulic fluid into the charge pump and the pump case.

When oil appears at the charge pump inlet and the case drain port, replace and tighten these fittings.

Release the air pressure on the hydraulic tank, remove the fittings and regulator and replace the the fill cap.

Check to see that the hydraulic pump is in neutral. With the control pot set to "0" the pump may be on stroke and need to have its "Null" adjusted. Loosen the null adjusting screw locknut (see figure 5, page 5) use an allen wrench to turn the adjusting screw until the pump flow stops turning the motor and then retighten the adjusting screw locknut.

Engage the PTO and start the engine and run at an idle.

Check the vacuum gage on the filter (see figure 3). it should read between 2 and 10" of Hg. If it does not, shut off the engine immediately. Find and correct the cause for a vacuum reading outside of this range before proceeding.

> Note: Cold hydraulic oil may cause a high vacuum. The vacuum reading should come back into this range after the oil has warmed up.

Run the hydraulic pump in neutral for 2 to 3 minutes with the engine at a fast idle of 1000 to 1200 RPM. this will let the charge pump fill the system with oil.

Make certain there is oil in the asphalt pump before turning the hydraulic motor.

Slowly move the hydraulic pump out of neutral by increasing the Circulation Rate using the circulation rate toggle switch.

Check to see if the hydraulic motor is turning. If not, shut off the engine and determine the cause.

If the motor turns, run the system at low speed for 5 to 10 minutes to allow the air to work out of the oil.

Top off the hydraulic tank and check for leaks while the system is running.

The system is now ready for testing at a higher speed and pressure.

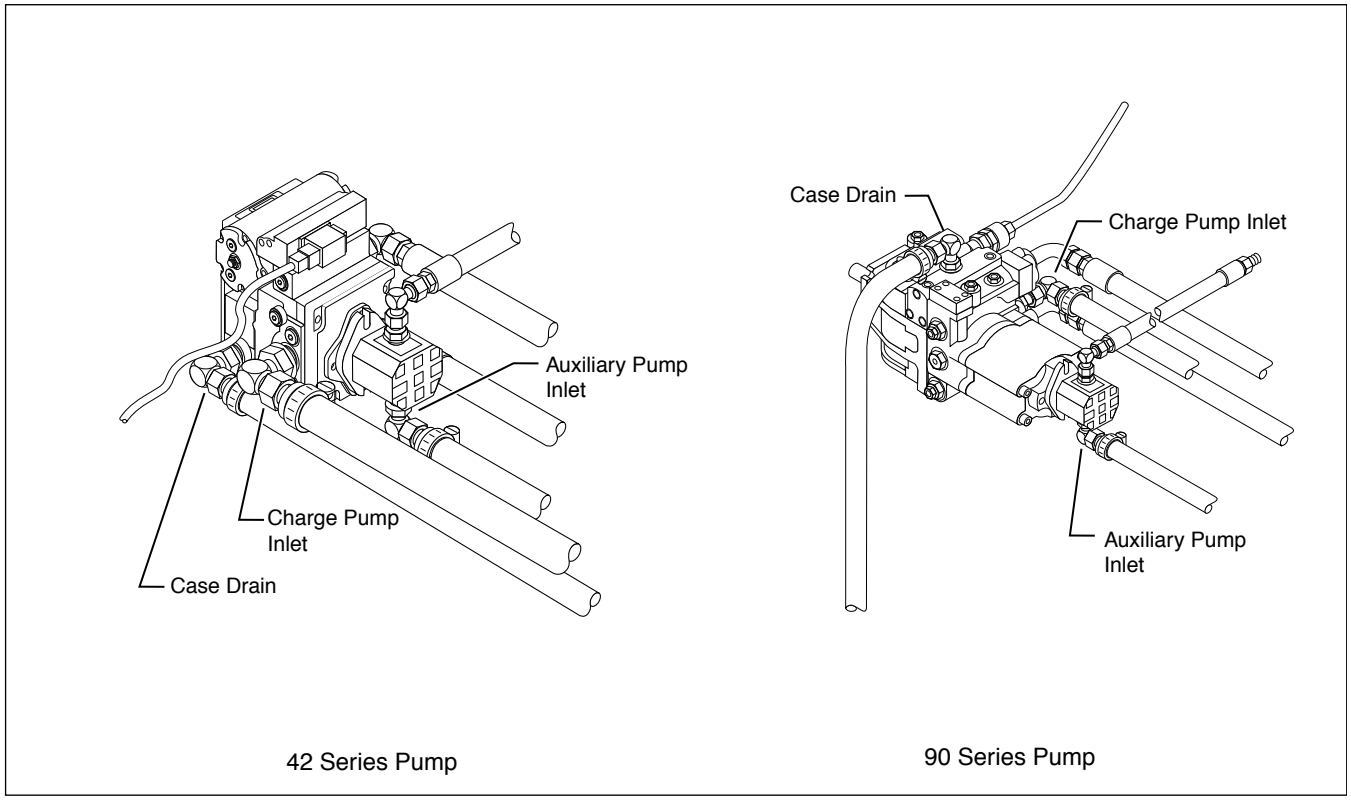
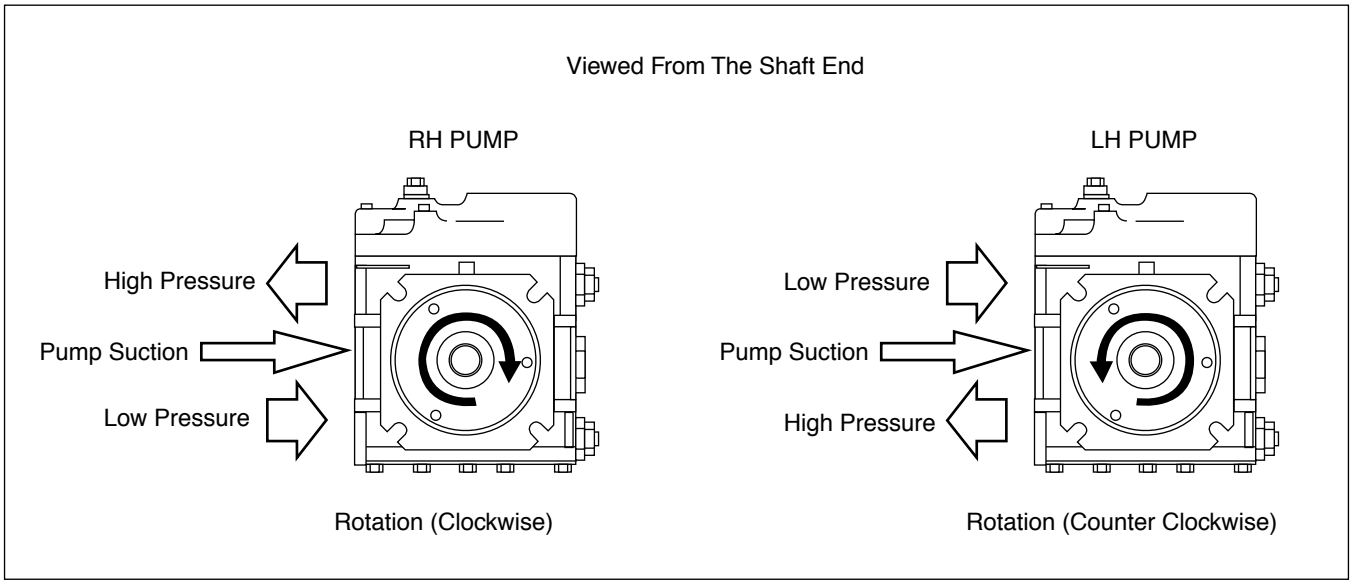


Figure 7. Case Drain Location



⚠ CAUTION

If Pump Rotation is wrong, consult factory or authorized Sundstrand dealer. DO NOT change position of high pressure and low pressure hoses to change pump rotation. Changing hose positions will damage the pump.

Figure 8. Case Drain Location

Spray Bar Latch Assembly Installation

Units Equipped With Power Lift And Shift

The right and left side spray bar latch assemblies are to be welded to the outside of the rear truck frame.

Center and raise the spray bar. Fit the latch assembly on the spray bar with the spray bar carrying roller centered under the latch pivot and the latch handle straight up.

Adjust the spray bar height so that when the bar is shifted fully right or left, while in the fully raised position, the bar feed tubes clear the rotary actuator, frame and gearbox. When this position has been determined to be satisfactory, weld in place.

Repeat for the other side.

Units Equipped With Power Bar Latch

Power latch assemblies are installed in the same manner. However, instead of a latch handle, there is an air cylinder. The air cylindersare to be fully extended in the locking position.

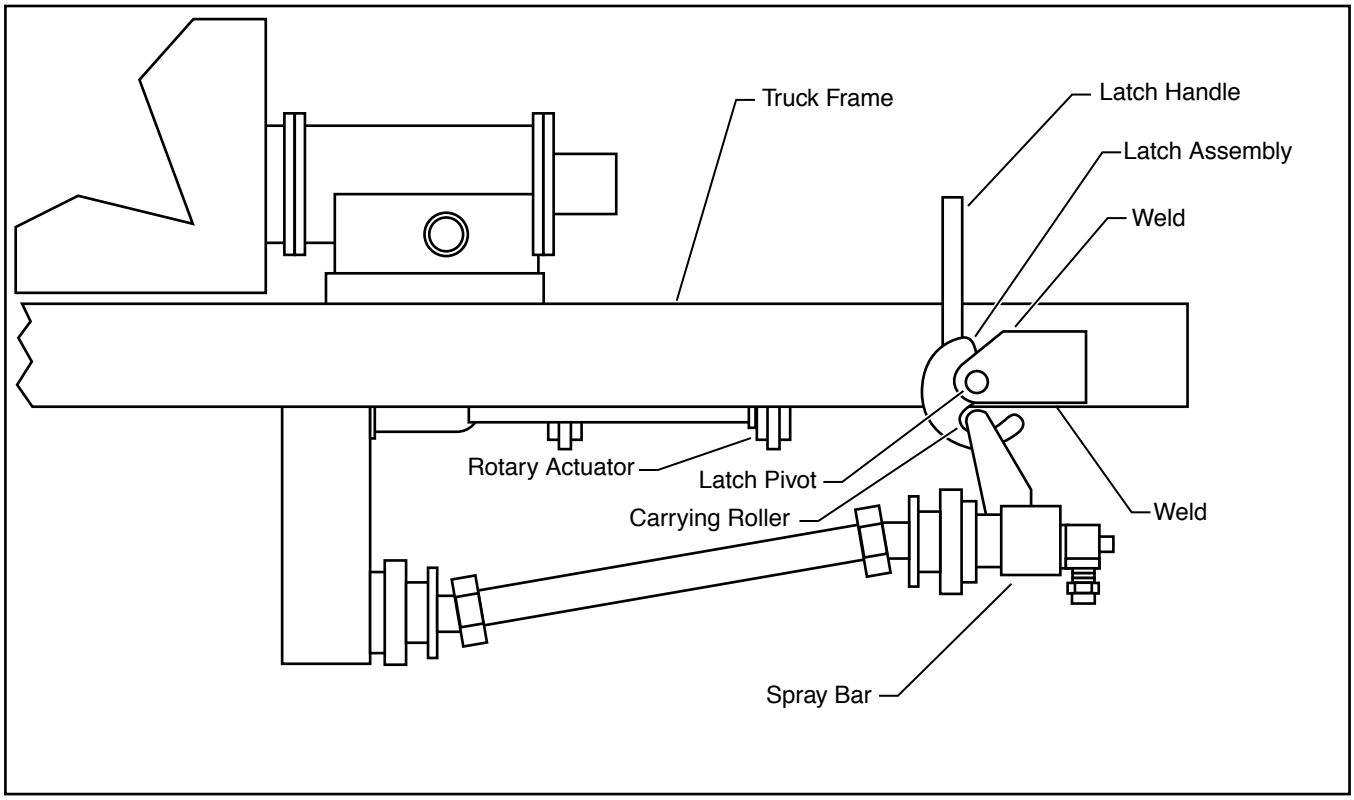
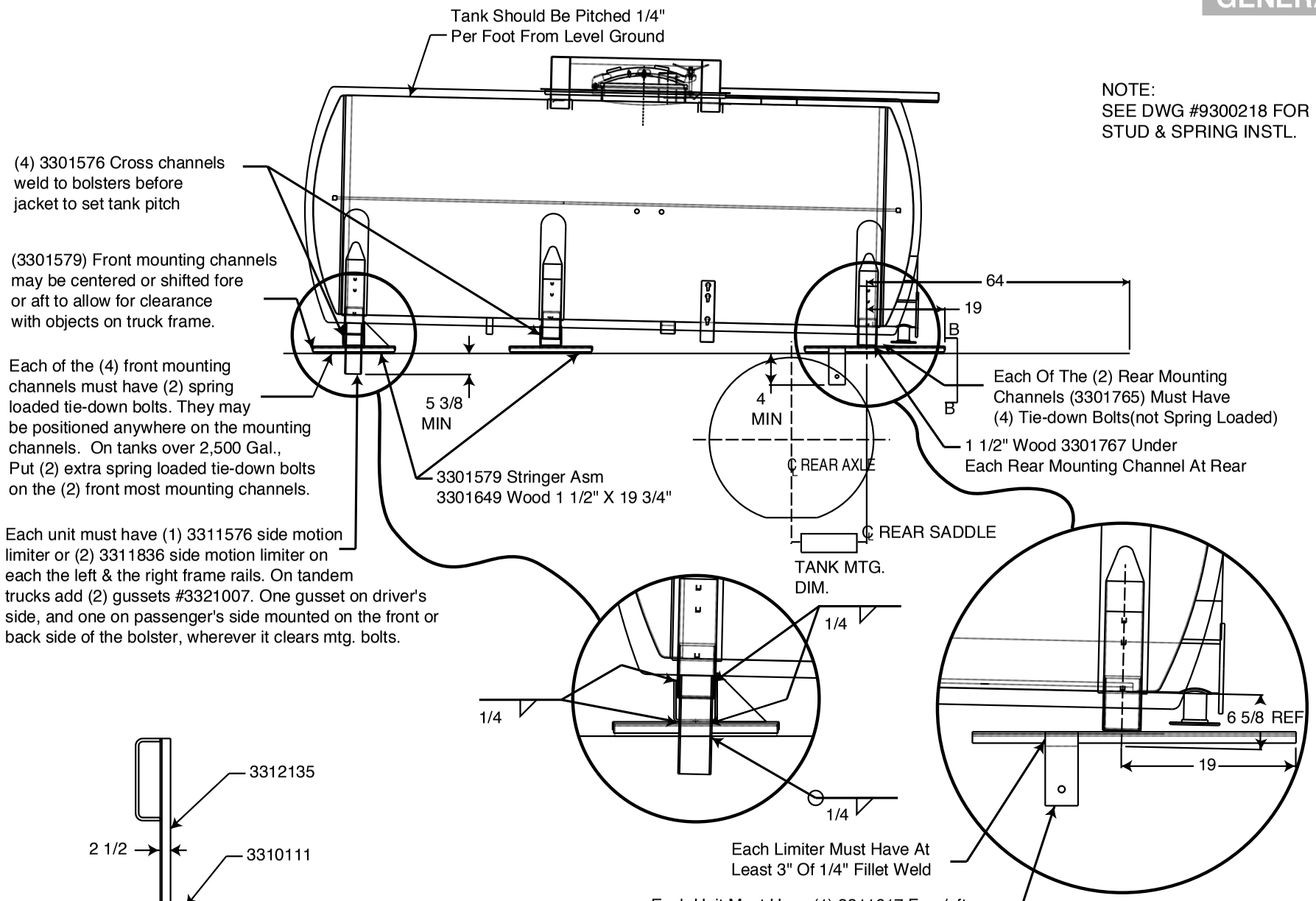


Figure 9. Latch Assembly

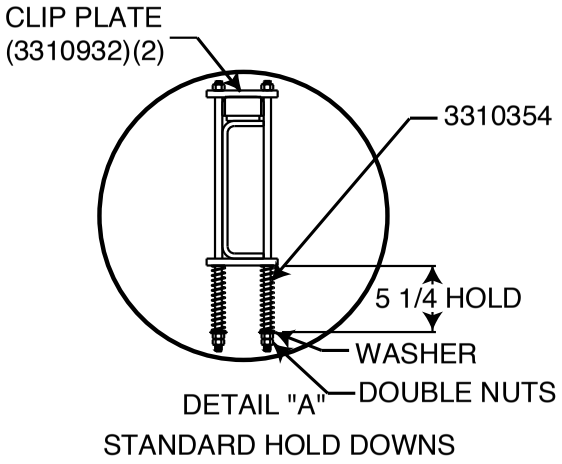


ALL DIMENSIONS IN INCHES DO NOT SCALE DWG

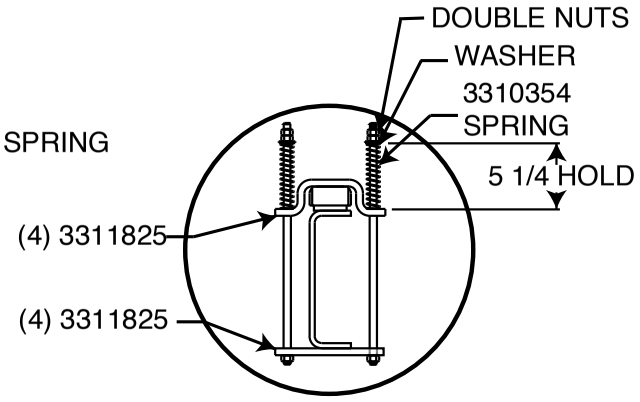
E.D.ETNYRE&CO.
OREGON,IL. 61061

TANK MOUNTING INSTALLATION
CENT II DISTRIBUTOR

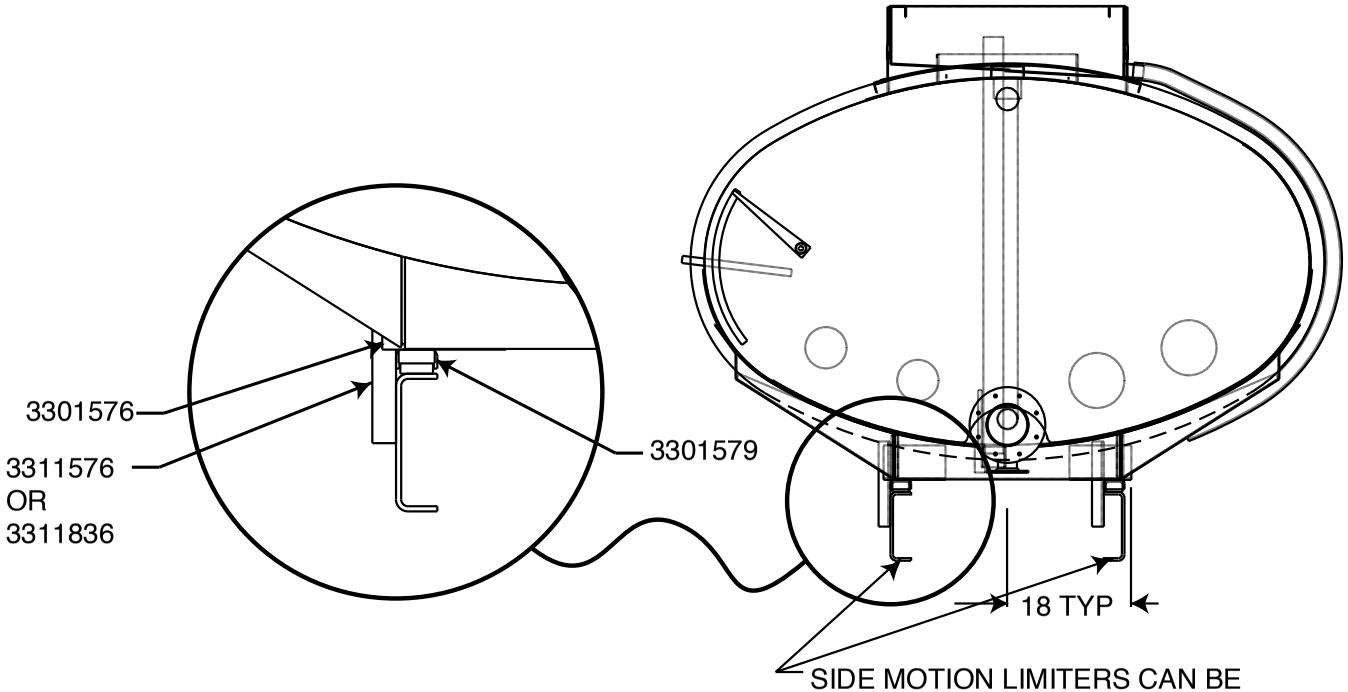
9302757
Page 1 of 2



DETAIL "A"
STANDARD HOLD DOWNS



DETAIL "A-1"
OPTIONAL HOLD DOWNS
IN SOME CASES, IT MAY BE NECESSARY
TO USE THESE PARTS:



NOTE: SEE DWG #9300218 FOR
STUD & SPRING INSTL.

ALL DIMENSIONS IN INCHES DO NOT SCALE DWG

E.D.ETNYRE&CO.
OREGON,IL. 61061

Steps For Mounting Etnyre Distributor:

1) Install offset cross member as shown in section B-B

2) Cut out all cross members behind axle

3) Extend truck frame if necessary

4) Locate saddles by marking on truck frame. take measurements from tank.

*) After step No.4 see Bulletin#13-03 "Instructions for mounting hydraulic componets to chassis", before proceeding.

5) Countersink wood stringer for protruding rivets in top flange of truck frame

6) Remove fenders

7) Arrange for hoisting distributor

8) Hoist distributor on truck,lifting from lifting rings on tank. set mounting dimension.

9) Check saddles, cab clearance & centering of tank on truck

10) Install hold downs as shown in detail "a".

*) see Bulletin #13-03 for the following illustrations. (figures #1 thru #9)

11) Install motion limiters as shown. they should be bolted to truck frame and welded to the underside of distributor frame.

12) Install spray bar latch assemblies or manual bar raise as applies to unit. see fig. 9.

13) Connect air supply line. see page 22.

14) Weld rear bumper to end of truck frame

15) Install ladder and floor plate or bar box if supplied as per page #20

16) Install panel and stand in truck cab see applicable figure #6.

17) Complete wiring as per instructions.

18) Install fenders.

19) Check and tighten all hold downs after one week of operation.

TANK MOUNTING INSTALLATION
CENT II DISTRIBUTOR
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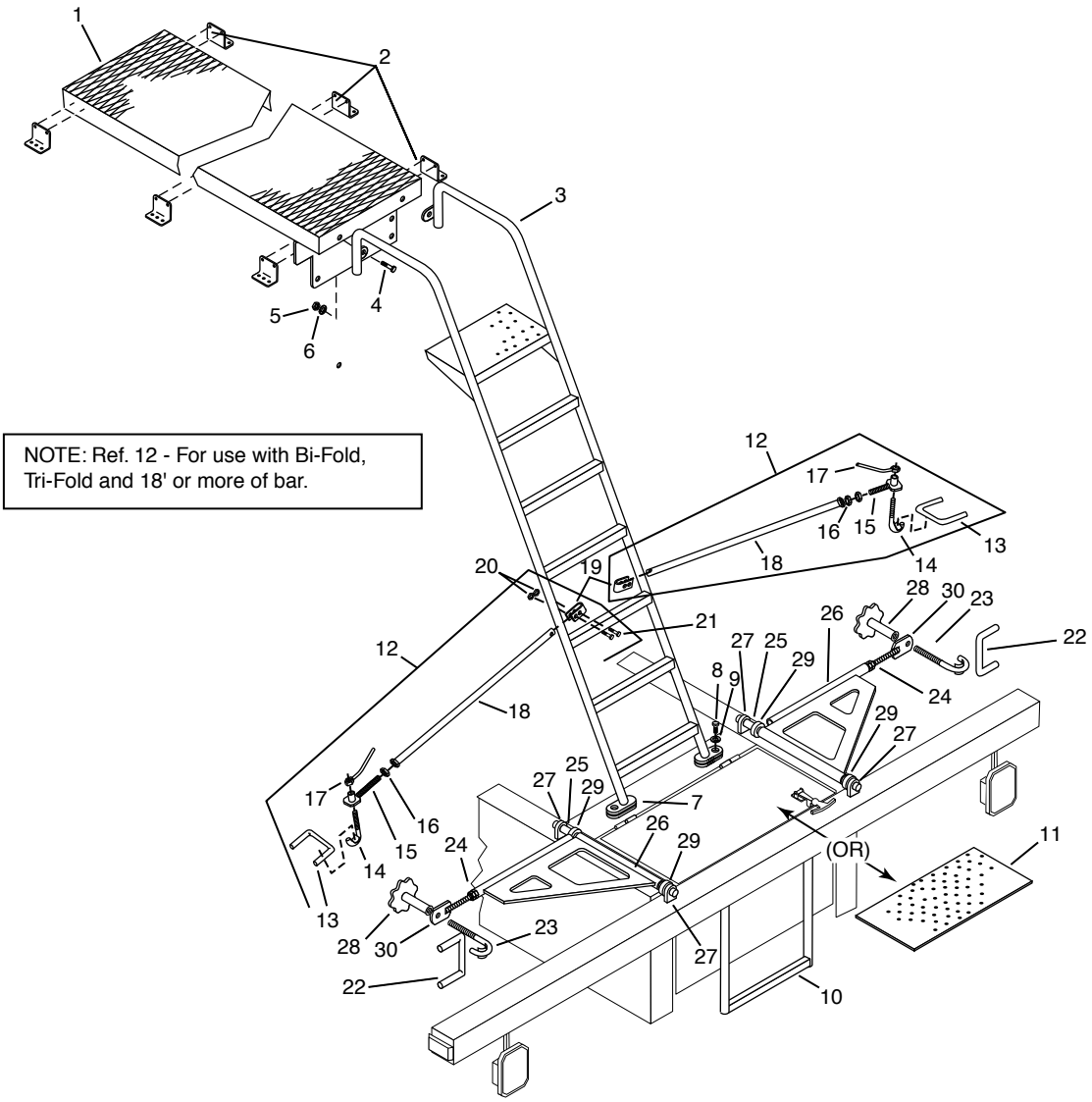
Page 2 of 2

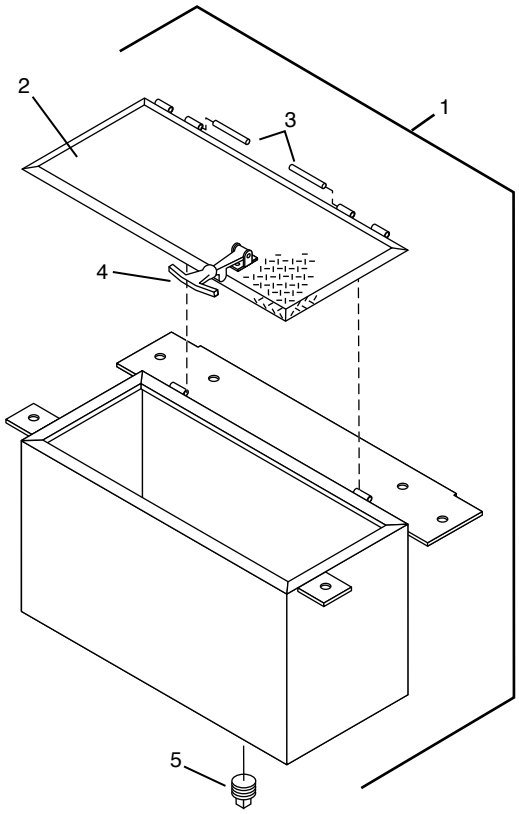
Ladder Assembly

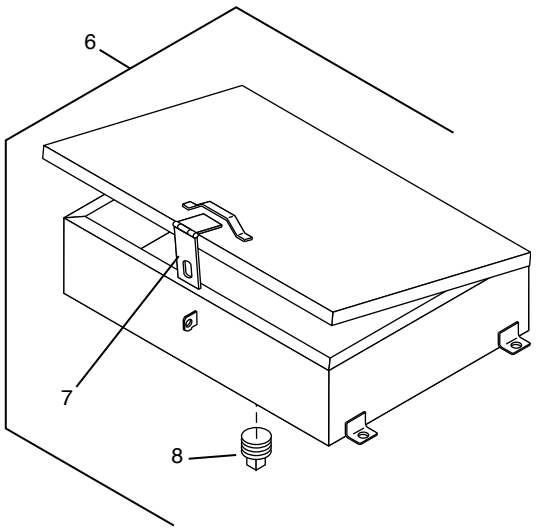


REF	PART NO.	QTY	DESCRIPTION	REF	PART NO.	QTY	DESCRIPTION
1	3301851	1	Walkway Asm	13	3350346	1	Bracket
2	3301310	6	Clip	14	3350347	1	Hook Asm
3	3301264	1	Ladder Asm - 42 x 74 Oval	15	3350340	1	Support Asm
	3301266	1	Ladder Asm - 47 x 78 Oval	16	0426897	1	Nut-Hex, Jam , 0.75NC
	3301268	1	Ladder Asm - 50 x 83 Oval	17	3350795	1	Wing Nut Asm
	3301150	1	Ladder Asm - 53 x 88 Oval	18	3352803	1	Pipe Asm
	3301270	1	Ladder Asm - 59 x 89 Oval	19	3352804	1	Formed Plate
	3301272	1	Ladder Asm - 65 x 90 Oval	20	9411727	2	Nut-Hex, Lock, 0.50NC
	3301201	1	Ladder Asm - 70 x 92 Oval	21	0122459	2	Screw-Hex, 0.50NC x 2.00
4	0120233	2	Screw-Hex, 0.38NC x 1.00	22	3353072	2	Bracket-Bar,Bar Hold Clamp
5	0120377	2	Nut-Hex, 0.38NC	23	3353171	2	Hook Asm-Bar Hold Clamp
6	0120382	2	Washer-Lock, 0.38	24	0426897	2	Nut-Hex,Jam,3/4NC,PD
7	3301144	4	Lug	25	3353172	2	Shaft-Wing Latch
8	0122017	2	Screw-Hex, 0.31NC x 1.00	26	3353174	2	Latch Asm-Wing
9	0120214	2	Washer-Lock, 0.31	27	3353175	4	Mount-Wing Latch
10	3301197	1	Lower Ladder Asm	28	3353176	2	Nut-HandwheelAsm
11	3311807	1	Floor Plate	29	6001582	4	Collar-Clamp On,Shaft,Stl
12	3352808	2	Wing Lock Asm	30	3350340	2	Support Asm-Bar Hold Clamp

Specify Unit Serial No., Part No., & Part Description

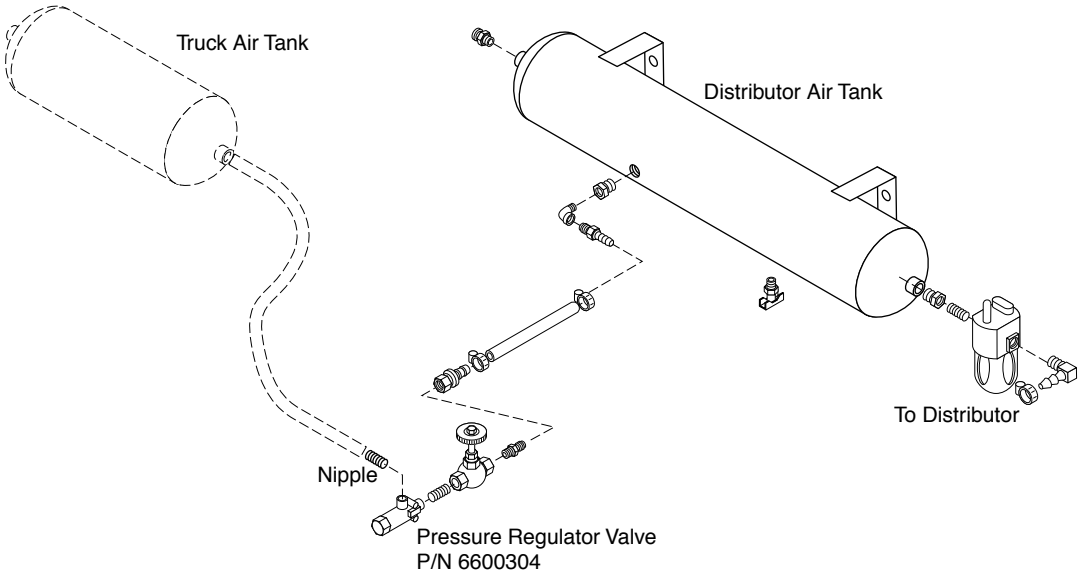
Tool Soak & Section Box Assemblies





REF	PART NO.	QTY	DESCRIPTION
1	3311812	1	Tool Soak Box Asm
2	3311810	1	Lid
3	3352683	2	Pin-Hinge
4	6001161	1	Latch-T Handle
5	0219301	1	Plug-Pipe, SqHd, 0.75NPT
6	3342424	1	Box Asm-Section Carrier
7	6000308	1	Safety Hasp
8	0219303	1	Plug-Pipe, SqHd, 1.00NPT

Air Supply



The air system on the distributor is already installed. You just need to connect the air supply line to the air supply of the truck as illustrated. Be sure to include the Pressure Regulator valve P/N 6600304 which will protect the truck air brake system against complete loss of air pressure should there be aproblem with the distributor air system.

CHASSIS PREPARATION
TANK MOUNTING

1. Establish tank location on truck chassis.

a) Measure from centerline of rear axle or rear bogie to centerline of the rear tank leg and mark location on top of truck chassis. (This measurement is determined based on a computer generated weight analysis from Etnyre Engineering Department) The customer must complete form K-505-94 at time of unit order so that the unit can be designed and built to fit the customer chassis in the field. It should be noted that tank-mounting dimension may interfere with chassis cross members and tank position may be shifted slightly to miss chassis cross member interference.

b) Measure from centerline of rear tank to the front tank leg and mark location on top of truck chassis.

c) Measure from centerline of rear tank to the second tank leg from the front and mark location on top of truck chassis.

2. Determine the height of the front wood to be used.

a) Choose the wood height that will level the tank mounting wood retainers from front to rear. Photo A below shows the front tie down arrangement using 3" high wood.

Photo B below shows the rear tie down arrangement using 2" high wood.

b) The center wood height is 2" also and may be shimmed with steel spacer as required after tank is set on mounting channels.

c) Photo C shows the spacer used at the second leg from front of tank.

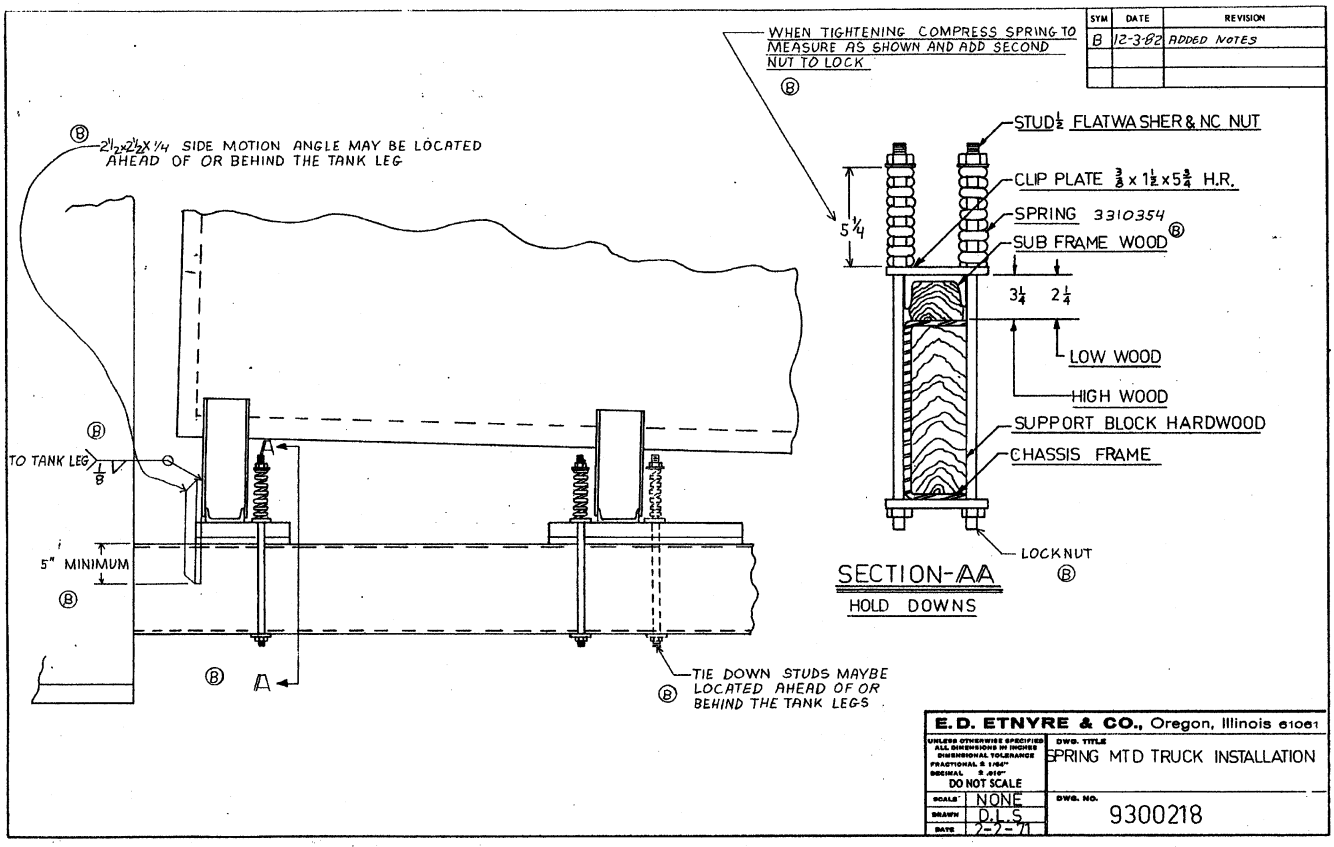
Photo A – Tiedown Weld

Photo B – Tiedown Rear

Photo C – Spacer Weld

3. Assemble the wood, wood retainers, springs, tie bolts, and hardware per drawing #9300218. Photo D shows the front tank-mounting configuration. Photo B shows the rear configuration. The rear configuration does not use springs. Springs are used on the two front tie downs only. Tighten the spring-loaded mounts to obtain 5 1/4" dimension measured from top of clip plate to top of spring as shown on drawing # 9300218 then add another nut to lock.

4. Clip plates are welded to the top of wood retainers as shown in Photo A. Weld the side opposite the tank leg only.



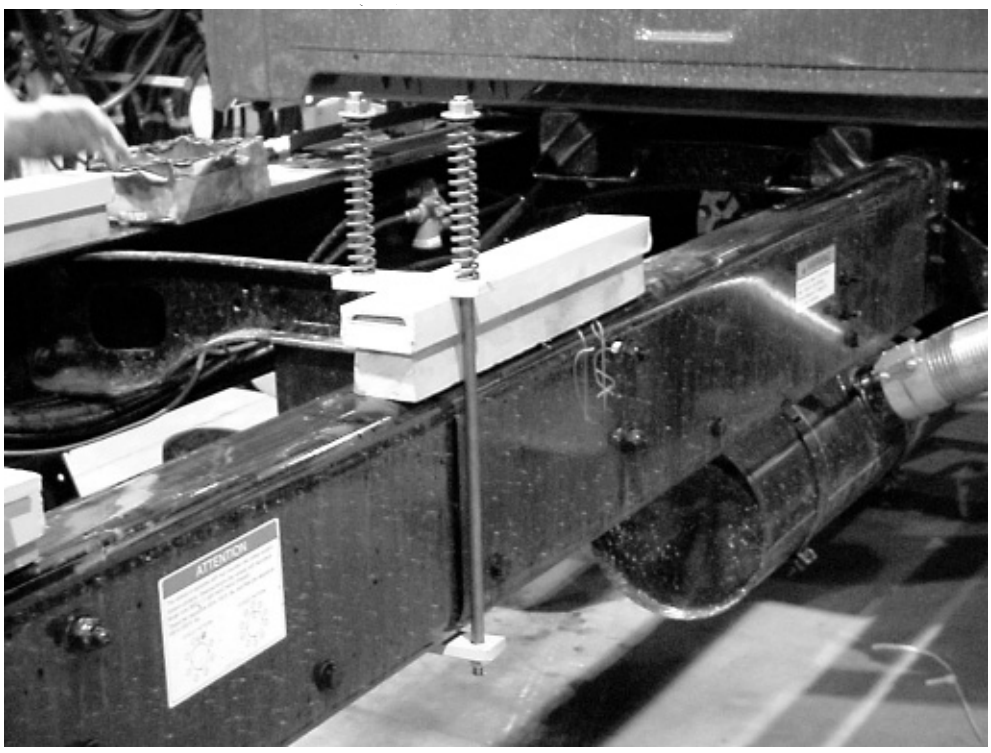


Photo D

Nut, Washer, Spring, Frame Clip, Wood Retainer, 3" Wood, Chassis Frame, Frame Clip, Nut, Tie Bolt.

Add a second nut at top to lock after obtaining the 5 1/4" dimension.

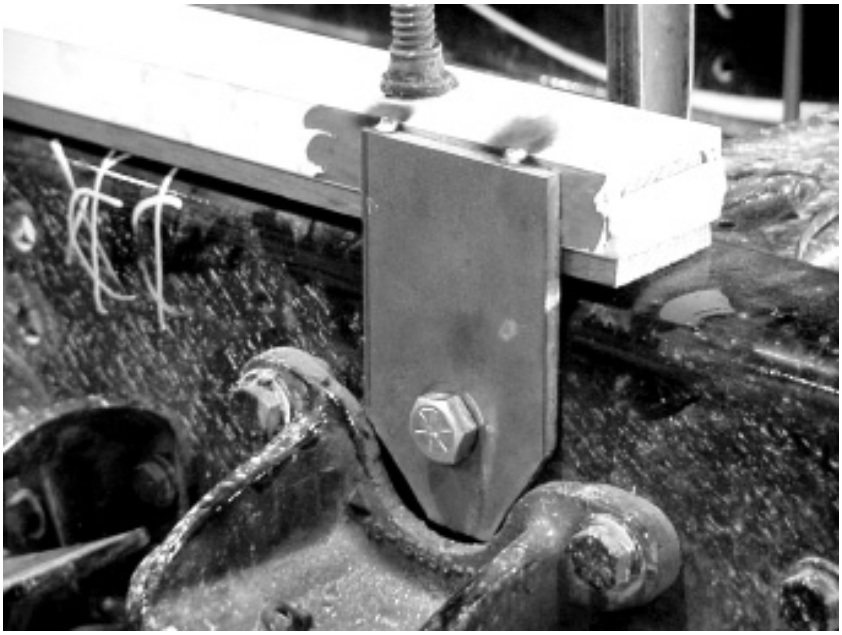
5. Install rear motion limiter.

a) Locate and tack limiter plate to rear wood retainer (some trimming may be necessary to clear frame mounted components I.E. spring hangers etc…) .

b) Drill 13/16" dia. hole in frame for a 3/4" grade 8 bolt, flat washer, and grade 8 locknut using hole in limiter plate to locate position on Chassis Frame (Refer to drawing # 9302757).

c) Assemble and tighten hardware then weld limiter plate to wood retainer as shown in Photo E.

Photo E
Rear Limiter



6. Mount LPG. Frame Tank Brackets

a) Pick a suitable location for the frame mounted LPG. Tank. Space on some chassis is limited, tank can be mounted either side of Chassis but is typically located on the left side (See Photo G).

b) Assemble brackets and hardware (J- bolt, bracket, flat washer, lock washer and nut (See Photo F).

Photo F
J Hook

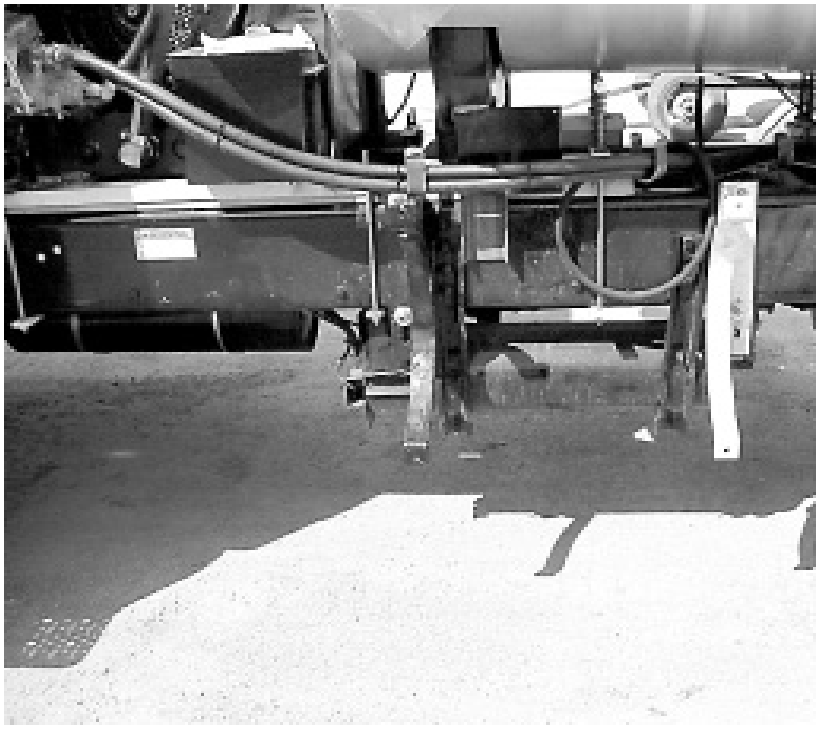
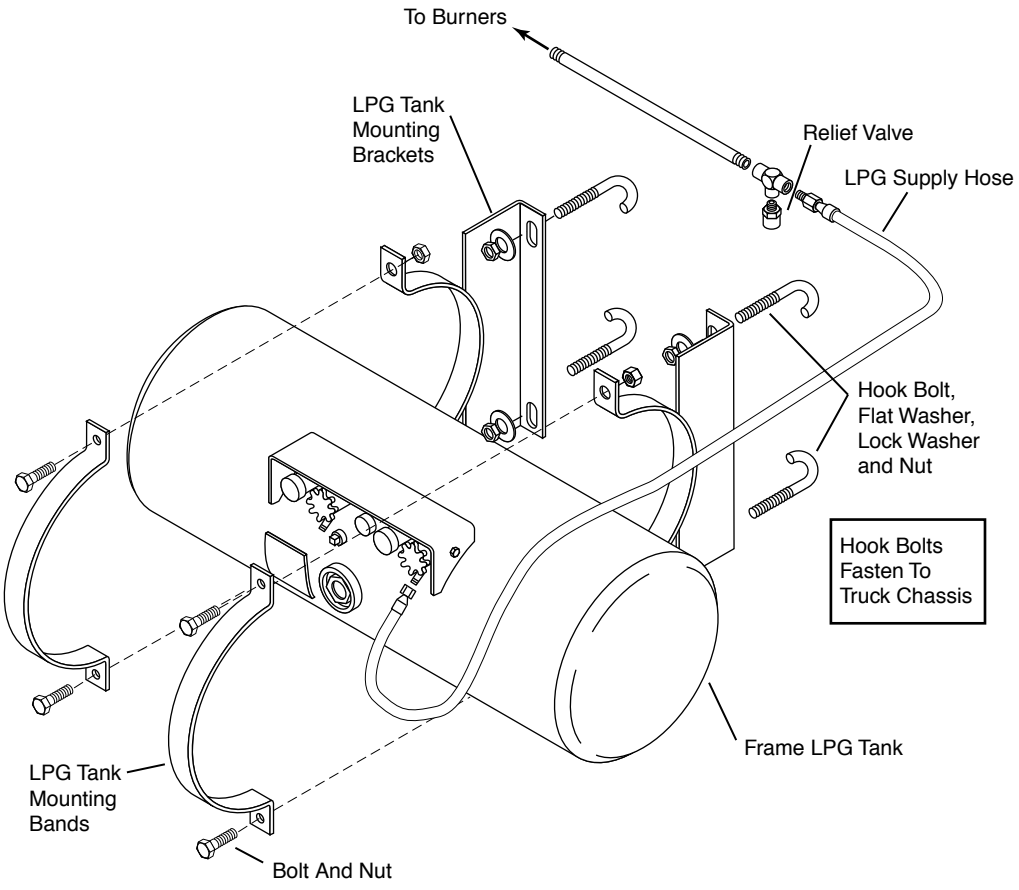


PHOTO G
LPG Brackets



7. Mount Bumper

a) Weld plates to rear of Chassis Frame Rails (see Photo H).

b) Center Bumper on Chassis and weld to End Plates (see Photo J).

Photo H
Frame End Cap

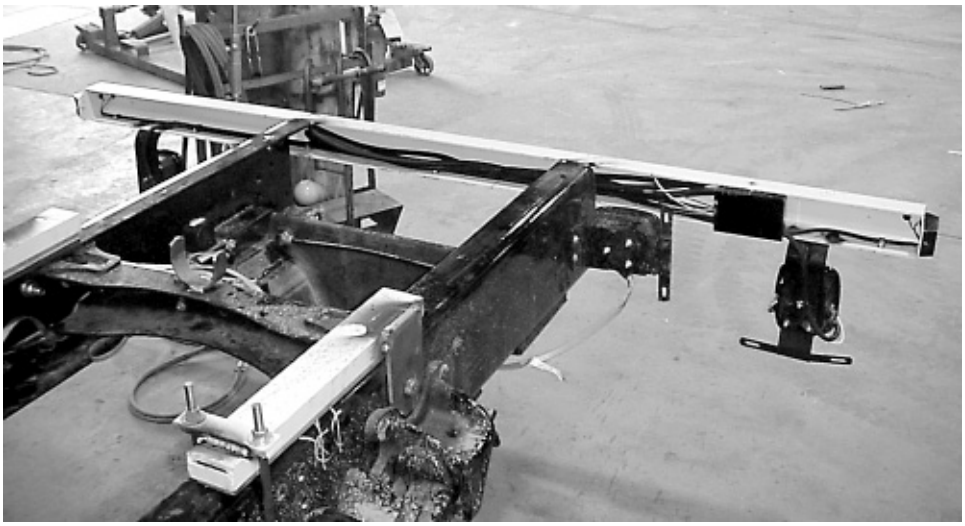


Photo J
Bumper and Rear Tiedown

8. Install Hose Hooks for Wire & Hose Routing

a) Locate and weld hose hooks for routing of wire and hoses (See Photo K). Locate at center of Chassis at locations that will not interfere with Asphalt Tank Mounting.

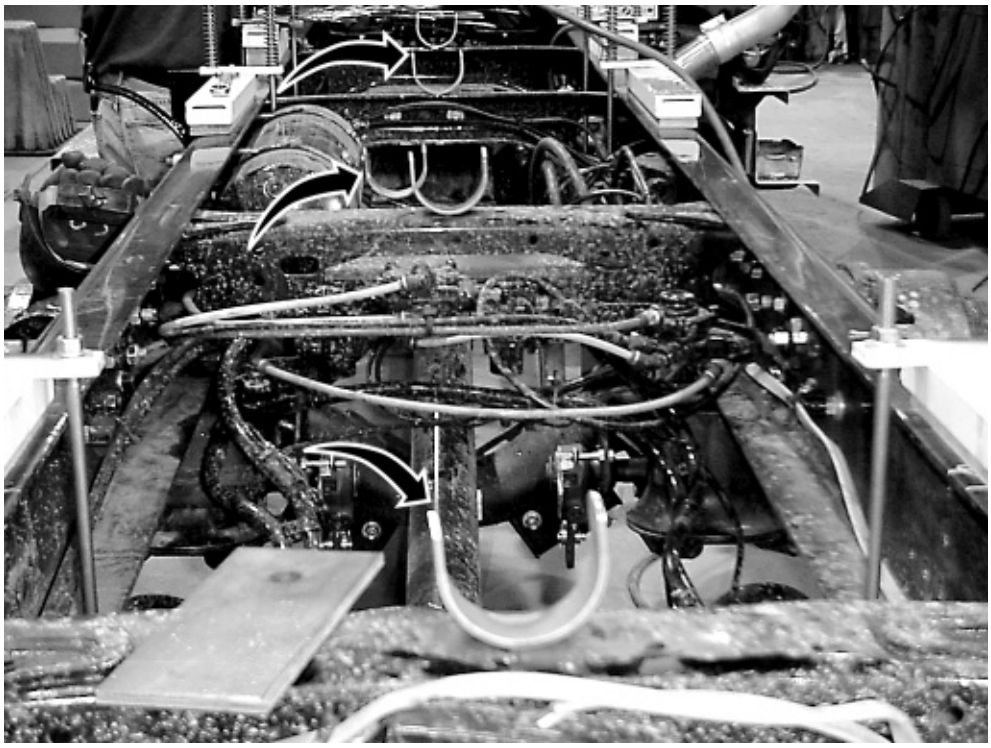


Photo K
Install Hose Hooks for wire and hose routing

9. Mount Asphalt Tank To Chassis

a) Lower Asphalt Tank onto Wood Retainers at locations marked on Chassis.

b) Refer to Drawing # 9302757 and follow instructions shown on drawing.Welding of Asphalt Tank to Wood Retainers is illustrated in photos L,M & N.

c) Photo L shows the Front Limiter and Tank Bolster Welded to Wood Retainer.

d) Photo M shows the second bolster with spacer located under bolster.

e) Photo N shows the rear bolster welded.

Photo L
Front Limiter and Tank Bolster Welded to Wood Retainer

Photo M
Bolster Spacer

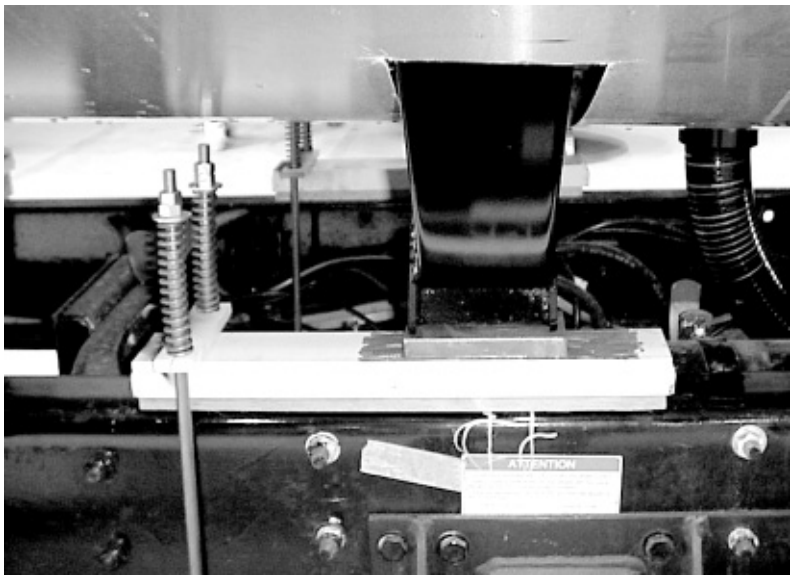
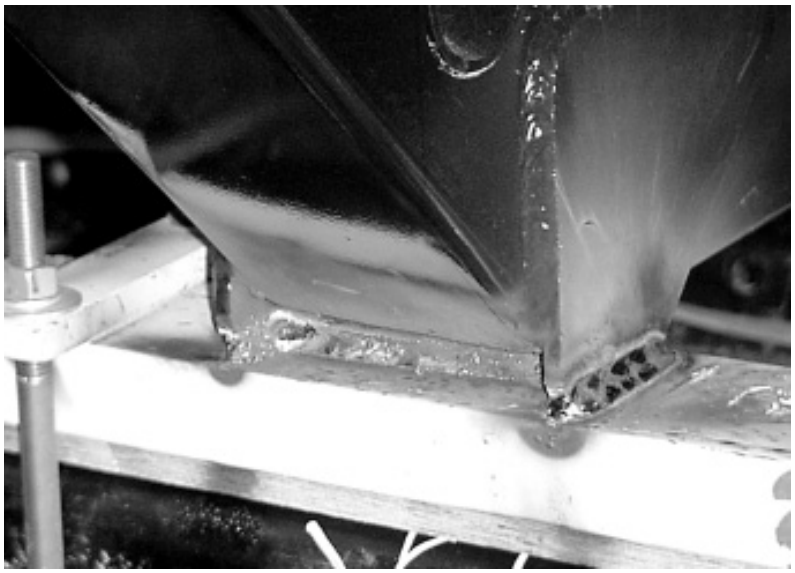
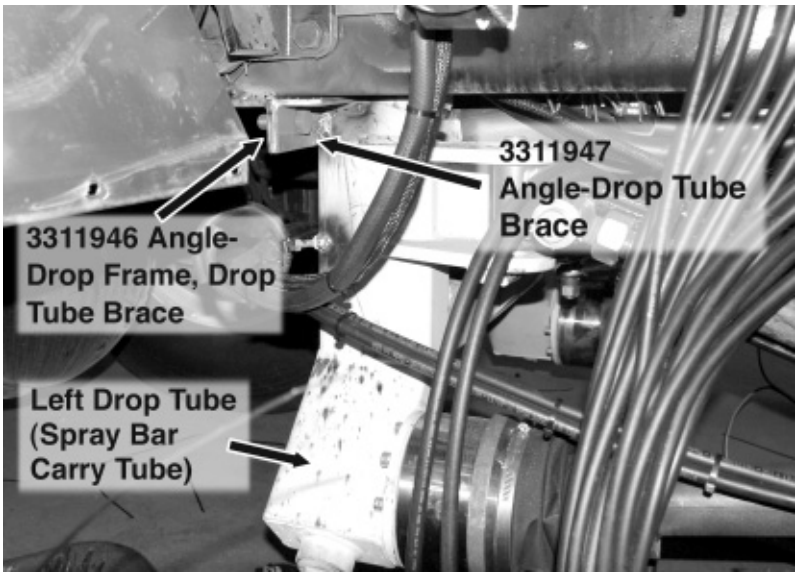


Photo N
Rear Bolster Weld



Drop Tube Support Angles

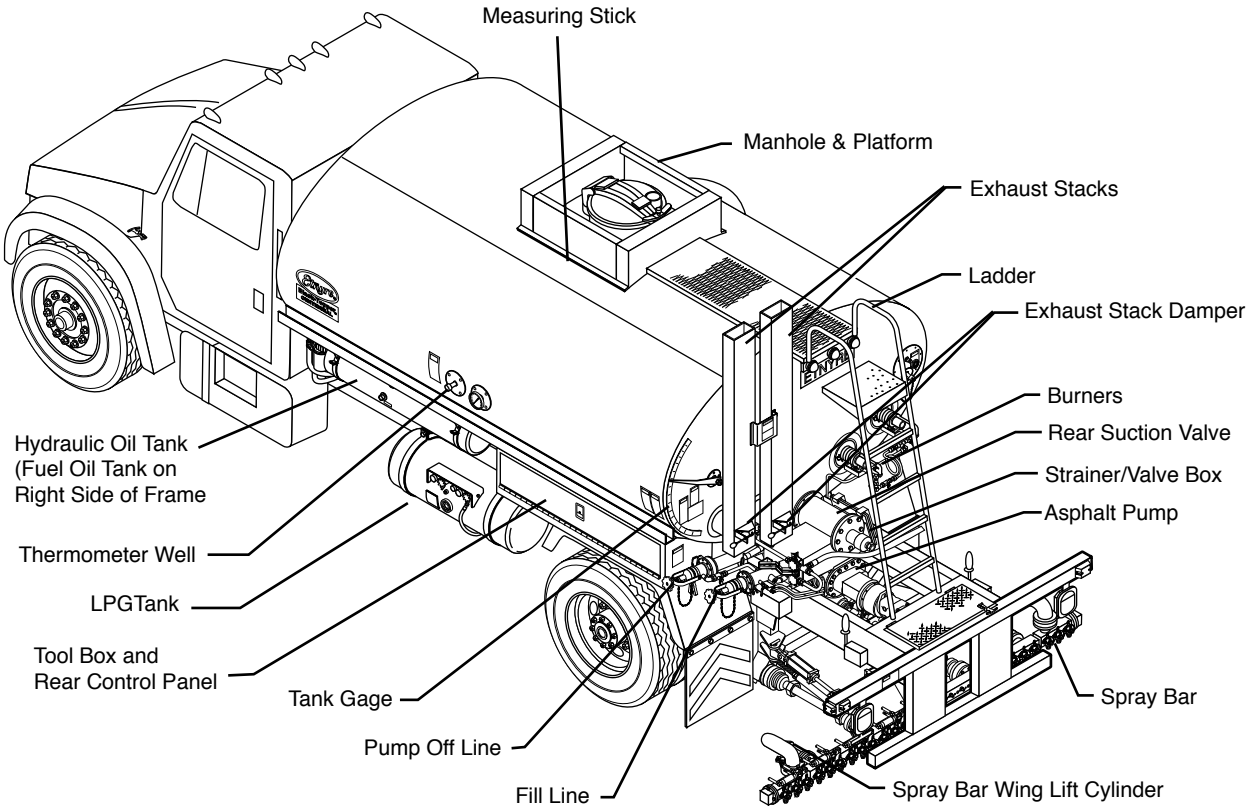
Photo P
Drop Tube Support Angles

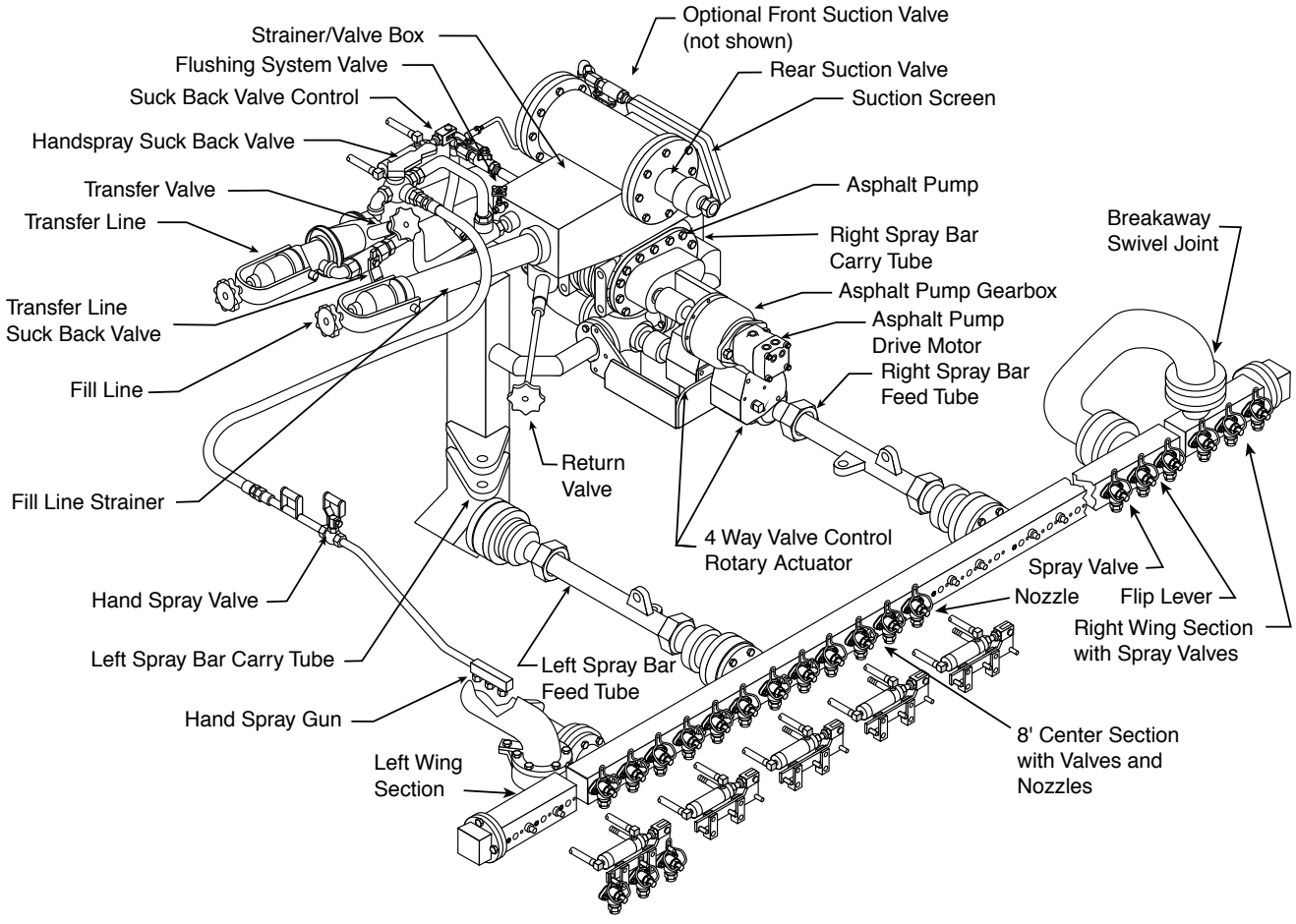


Weld angle frame brace 331146 to truck frame as shown. Weld drop tube brace 331197 to spray bar drop tube. Fasten braces together with a bolt as shown. Install on both the left side and right side of distributor.

Two each of 331146 and 331197 angle frame braces are supplied.

General Identification





Wiring Instructions

The Distributor is basically pre-wired at the factory

To Complete the installation, you will need to.....

1. Attach the power cables to the hydraulic pump stroker and to the radar speed sensor.

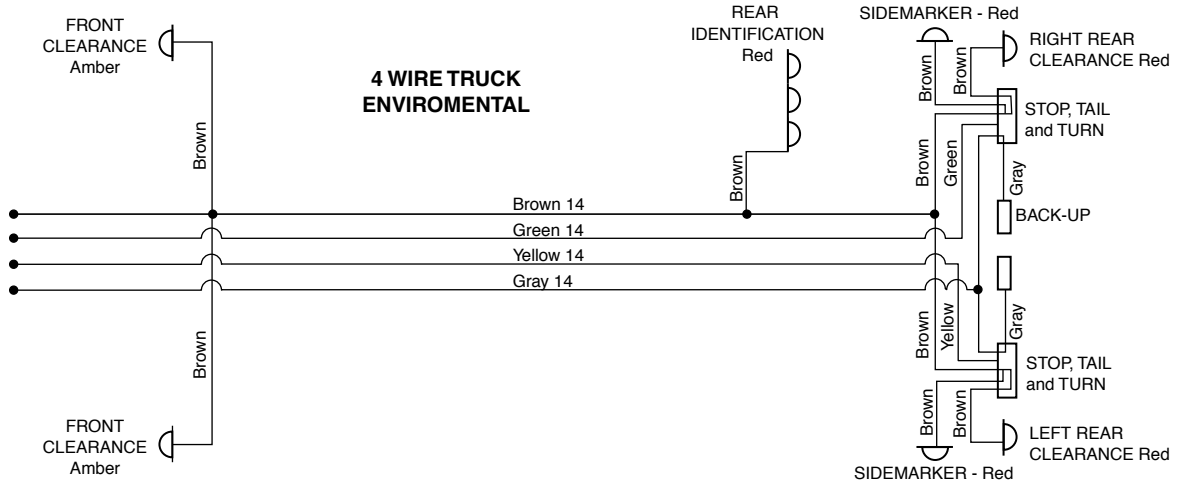
2. Route these cables along with the main cable bundleand bring them all into the truck cab through the floor next to or through the control box stand, depending on the type of stand provided (See Figure 6)

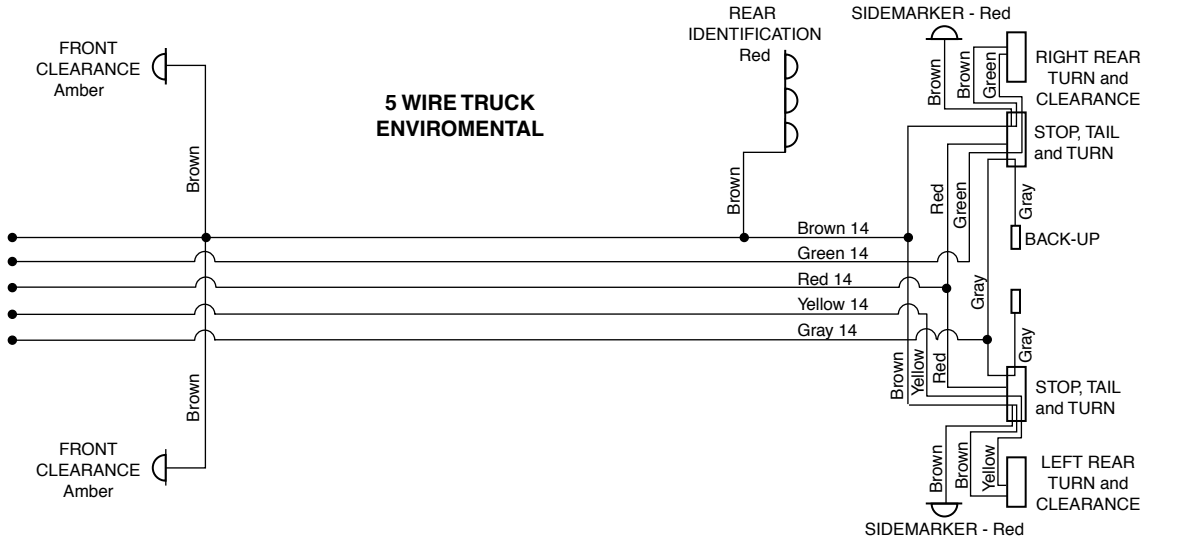
3. The wires in the main cable bundle terminated in quick connectors. Attach them to the appropriate plugs on the rear of the controll box.

4. Connect the power cable from the control box (a red 10 gauge wire) to a suitable positive (+12 Volt DC) switched power source, using a minimum 15 circuit breaker of fuse which is turned off when the ignition switch is turned off, and hot only when the ignition switch is turned on.

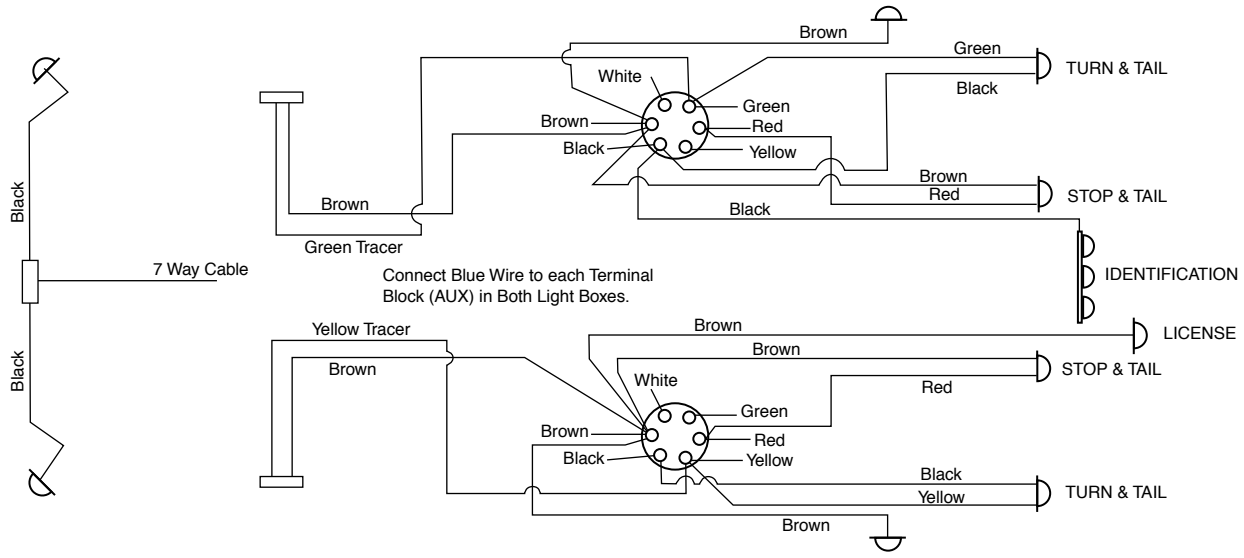
5. Connect the rear light cable ot the truck's electrical system per the wiring diagrm.

Wiring Diagram - Lighting





TRUCK LITE, 4 LAMP - 9301227



Specify Unit Serial No., Part No., & Part Description

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