



Doing Our Best to Provide You the Best

7-11-2018
8C010272, Rev. AB

SIDE DUMP

- **Tractor Wiring Instructions**
Train Electric Over Hydraulic System
- **Lead Trailer Parts**



Control Box



OPERATOR MANUAL

The TrailerPro control system operates the tub dump, the tarp, and the lift axle (if equipped) on both the lead and the second trailer of the train. All of these functions are combined into one cab mounted control box to make the train as easy to use as a single trailer.

There are two items to wire on the tractor before you can operate your Demco side dump train, the control box and the tarp power wire.

Installing The Control Box

1. The control box should be mounted in the tractor cab within easy reach of the driver.
2. The red/black power cord has a cigarette lighter plug that can be plugged in to any convenient power point in the tractor cab. (If it is necessary to hard wire the power cord, cut off the plug, split the wires and connect the red wire to a 12v dc power source and the black wire to ground. Red wire must be positive and the black wire grounded. Reversing them may cause damage to the control system.)
3. Route the gray cord with the two 9 pole male plugs out of the cab and to the front bulkhead of the trailer. The plugs are marked as "LEAD" and "SECOND" and are also color coded with cable ties. Reversing the plugs will not work.
4. Tie up all wires.

At this time you will be able to operate the lift axle(s) and the dump the tub
(NOTE: Air will need to be supplied to the trailer for the lift axle to operate properly. Hydraulic oil must be supplied to the trailer to dump the tub.)

Wiring The Tarp Power Wire

1. To use the tarp you will need to supply 12 volt power to the trailer to operate the tarp motor. Due to the large power draw of the tarp motor, the electrical supply must be hooked directly to the battery and the heavy gauge wire included with the kit must be used.
2. Refer to the tarp manufacturer's diagram for reference. The tarp control relay has already been mounted on the trailer and the momentary switch that rolls/unrolls the tarp is in the control box installed previously. All that needs to be done is to run power and ground to from the battery to the female two pole socket on the road side front corner of the trailer.
3. Locate the circuit breaker as close to the positive battery post as possible. If the circuit breaker is not mounted to the battery box or truck frame, make sure that the terminals cannot touch anything that would cause a short circuit.
4. Separate enough of the white wire on the heavy gauge white/black cord to reach from the positive battery terminal to the circuit breaker. Cut off the white wire. Strip the white wire and crimp on ring terminals to match the battery cable bolt and the post on the circuit breaker. Attach the white wire to the circuit breaker. **(Don't hook the white wire to the battery until every thing else is wired)**
5. Crimp a ring terminal on the black wire and attach it to the negative battery post. Crimp a ring terminal on the white wire which is still attached to the black wire and attach it to the circuit breaker.

6. Route the white/black cord to the female socket on the trailer. Cut the cord to length and strip the ends back to slip into the terminals on the back of the male 2 pin plug. Match the white and black wires to the corresponding wires in the socket on the trailer. You can slip the cover off the back of the socket to make sure that the wires match. Secure the cord to the truck frame as necessary.
7. Hook the white wire to the battery.
8. The tarp will now operate from the control box. It is best to have the tractor running while operating the tarp.

Hydraulic Hook-up

The tractor must have a hydraulic pump and reservoir to supply hydraulic oil to the trailer to dump the tub. The pump needs to supply 25 to 30 gallons per minute of oil at 2,500 to 3,000 psi. We recommend a minimum of a 15 gallon system reservoir. The tractor should also have a relief valve to protect the tractor's hydraulic system.

When hooking the tractor to the trailer, the pressure line from the pump must hook up to the female quick coupler on the trailer and the return to the reservoir must hook up to the male quick coupler. The control valve on the trailer will not operate properly if the oil flow is reversed. The quick couplers on the trailer are marked "IN" and "OUT" as a reminder.

Using the Control Box

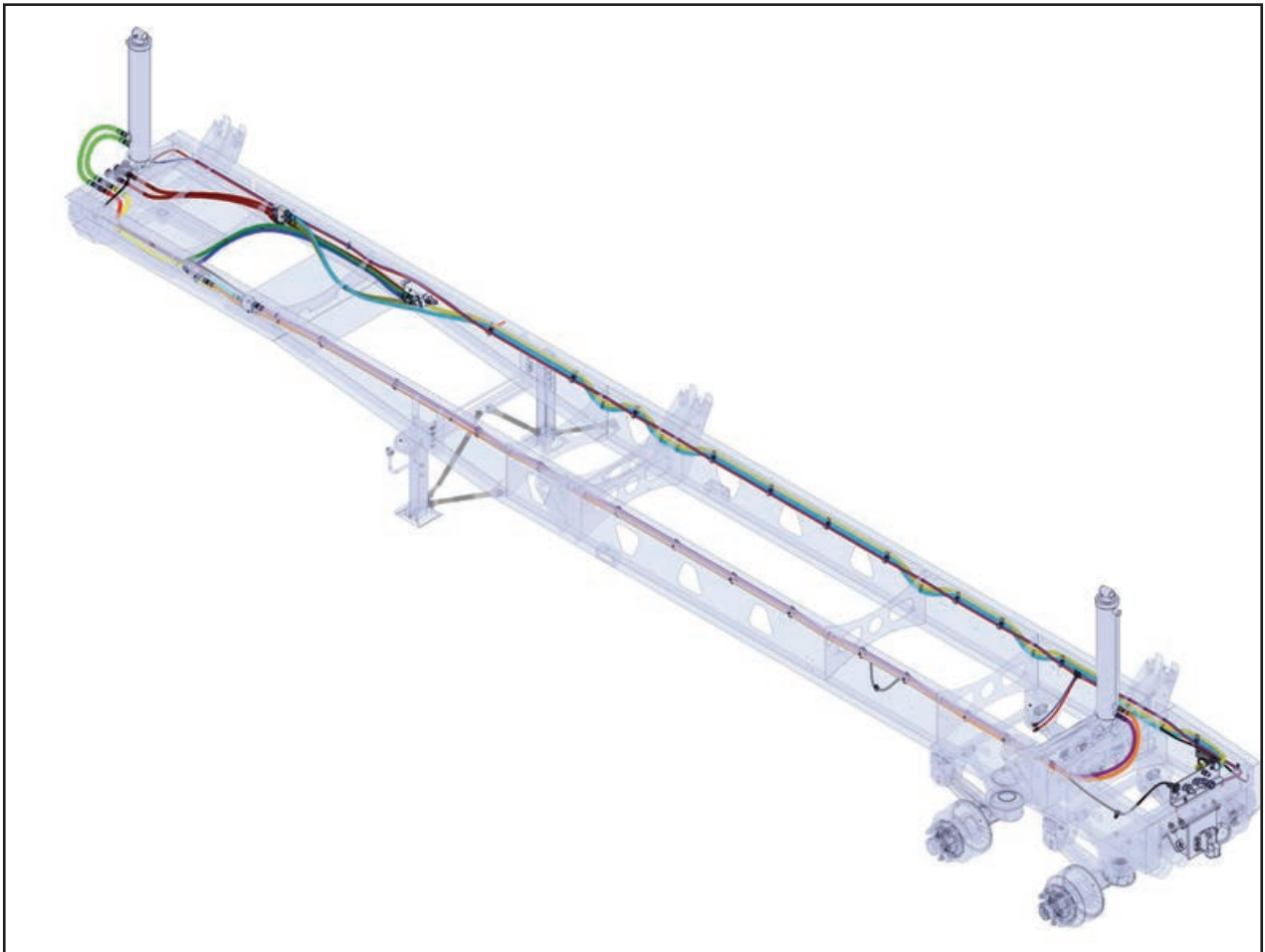
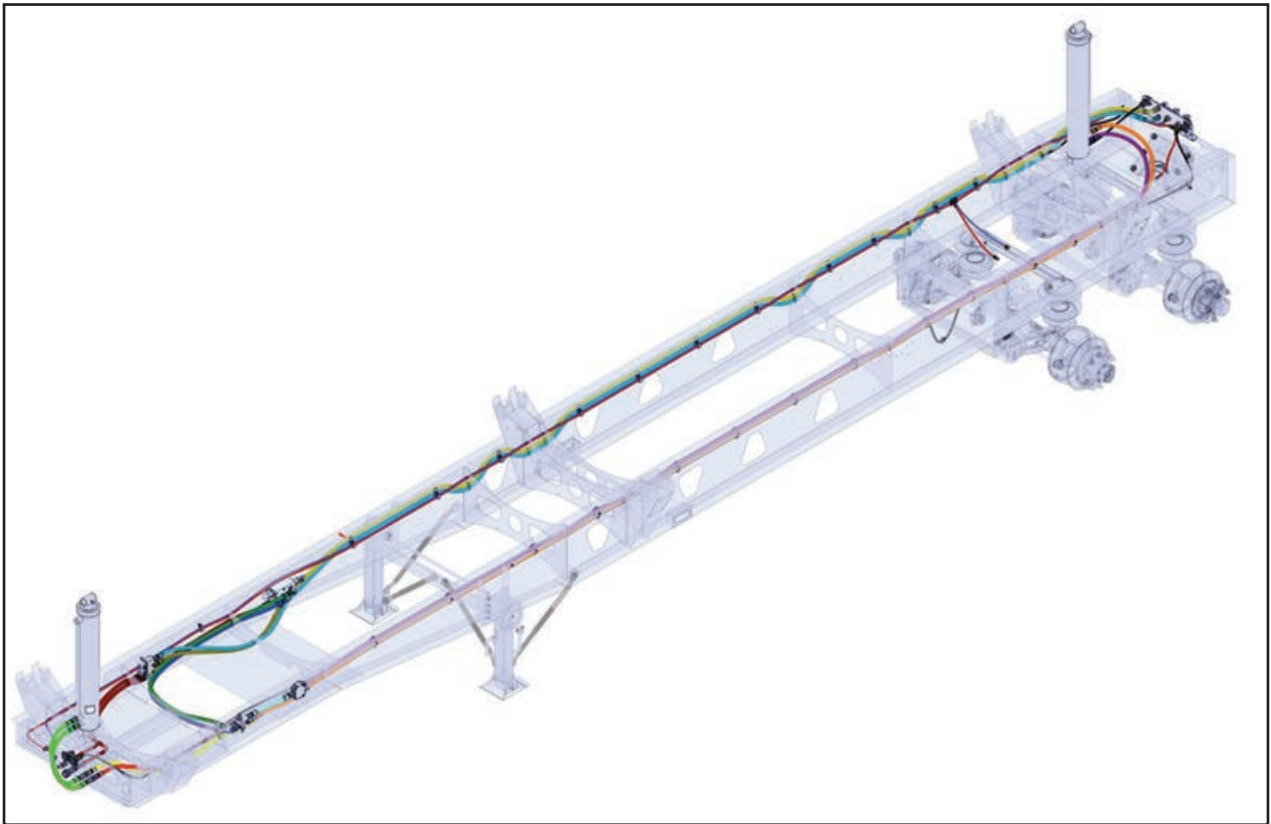
The left two switches on the control box control the lead trailer and the right two switches control the second trailer. The lift axle switch will operate the lift axles on both the lead and the second at the same time. (If the trailers are equipped with a lift axle.) **The tarps must be completely rolled up before dumping the tubs. Dumping the tubs with the tarps unrolled will ruin the tarps and possibly roll over the trailer and the tractor.**

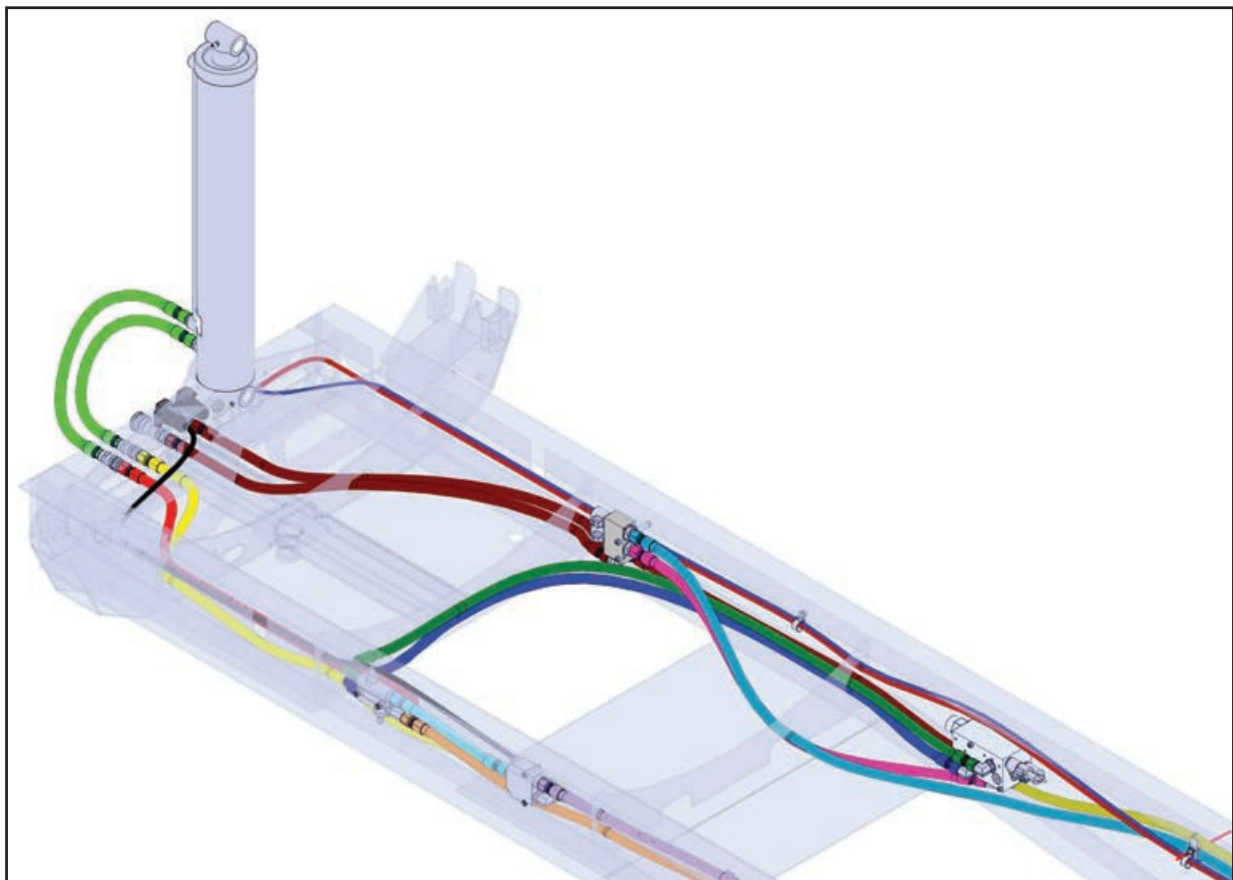
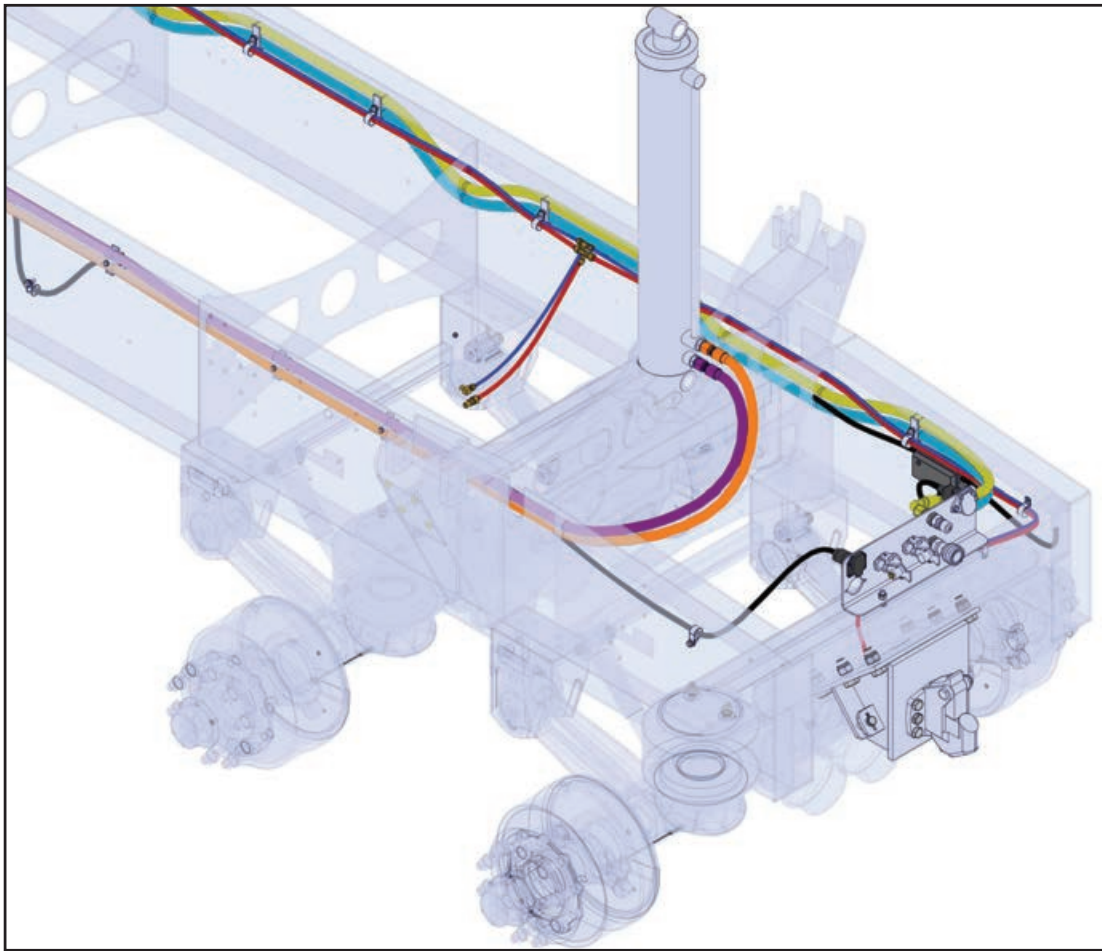
Operating the Trailers Individually

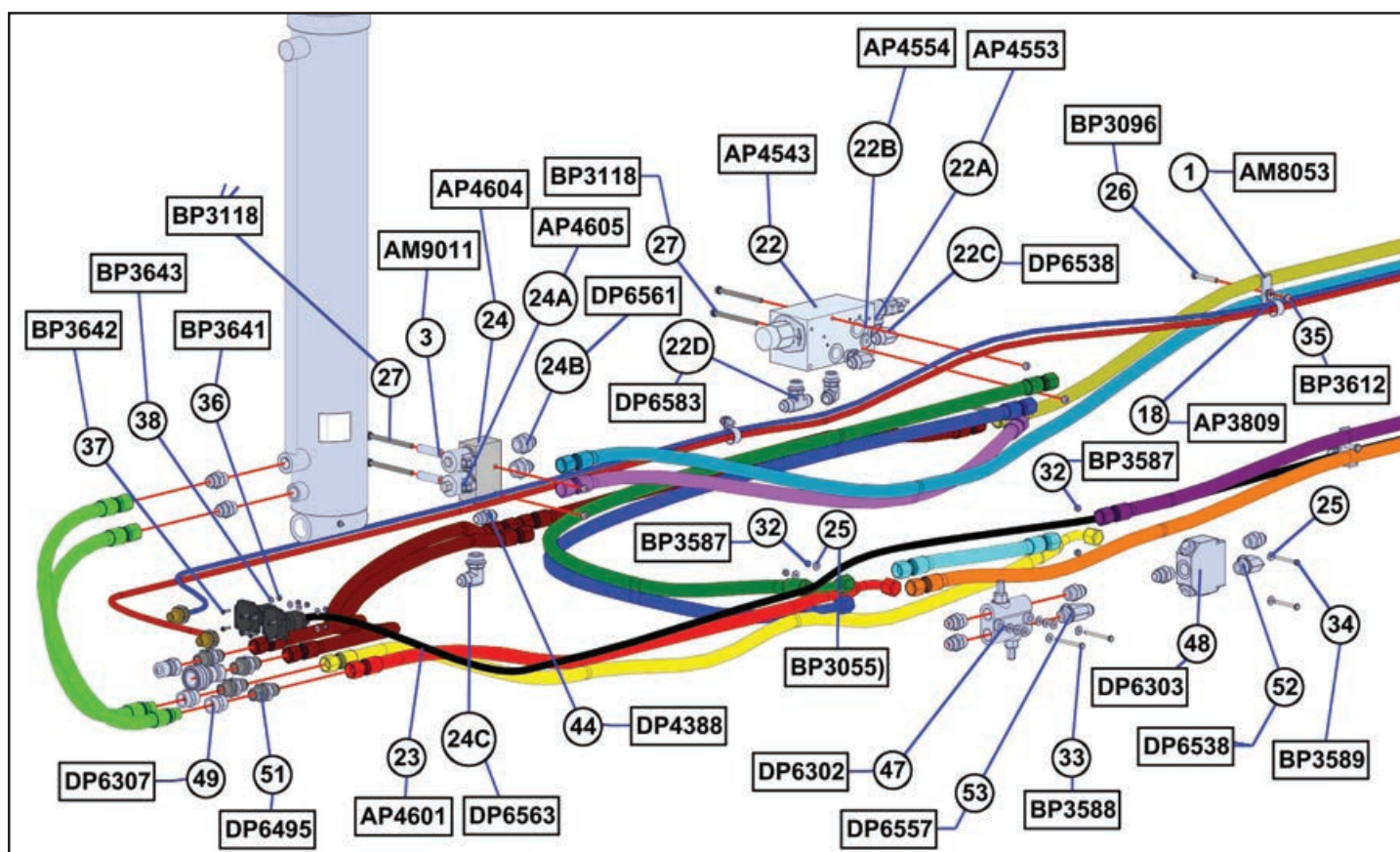
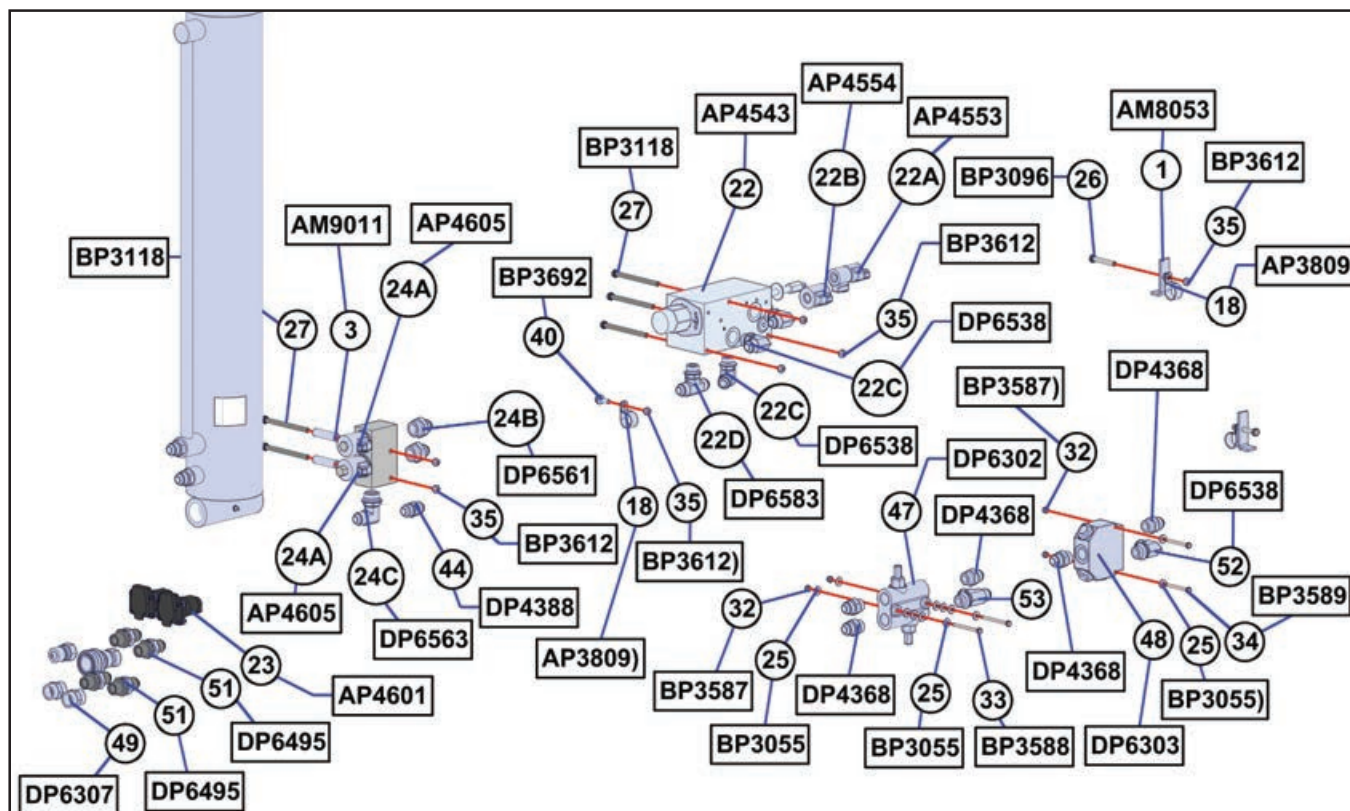
The lead trailer can be used alone by simply unhooking the dolly from the lead trailer. The left hand side of the control box will be used. The right hand side of control box will not do anything. (NOTE: The lead trailer can only be operated with the dual control box.)

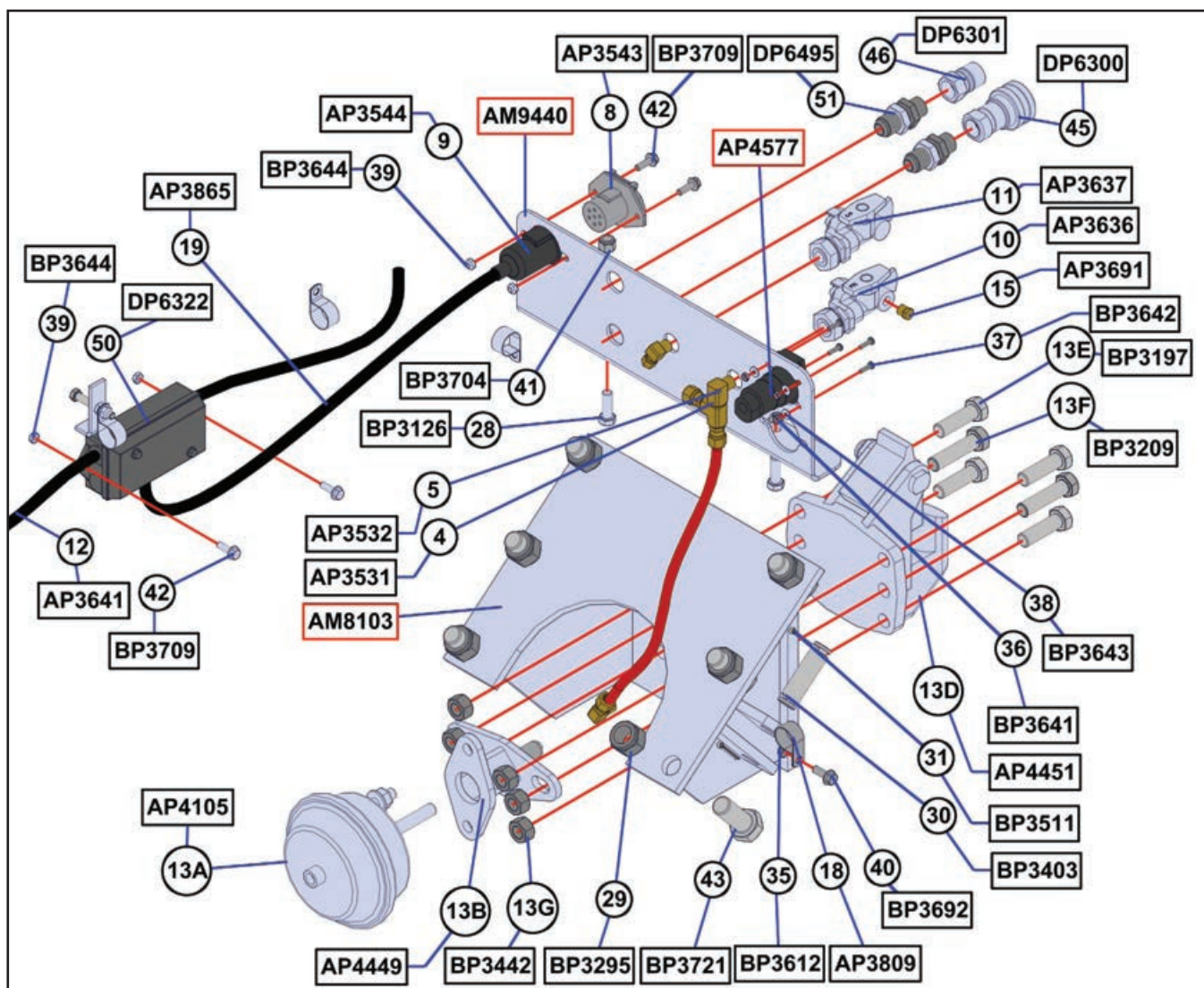
If you wish to pull the second trailer by itself using the tractor with the dual control box, plug the second trailer plug into the 9 way socket on the second trailer and use the right hand side of the control box to operate the trailer. This same method can be used to pull any Demco trailer equipped with a TrailerPro control valve.

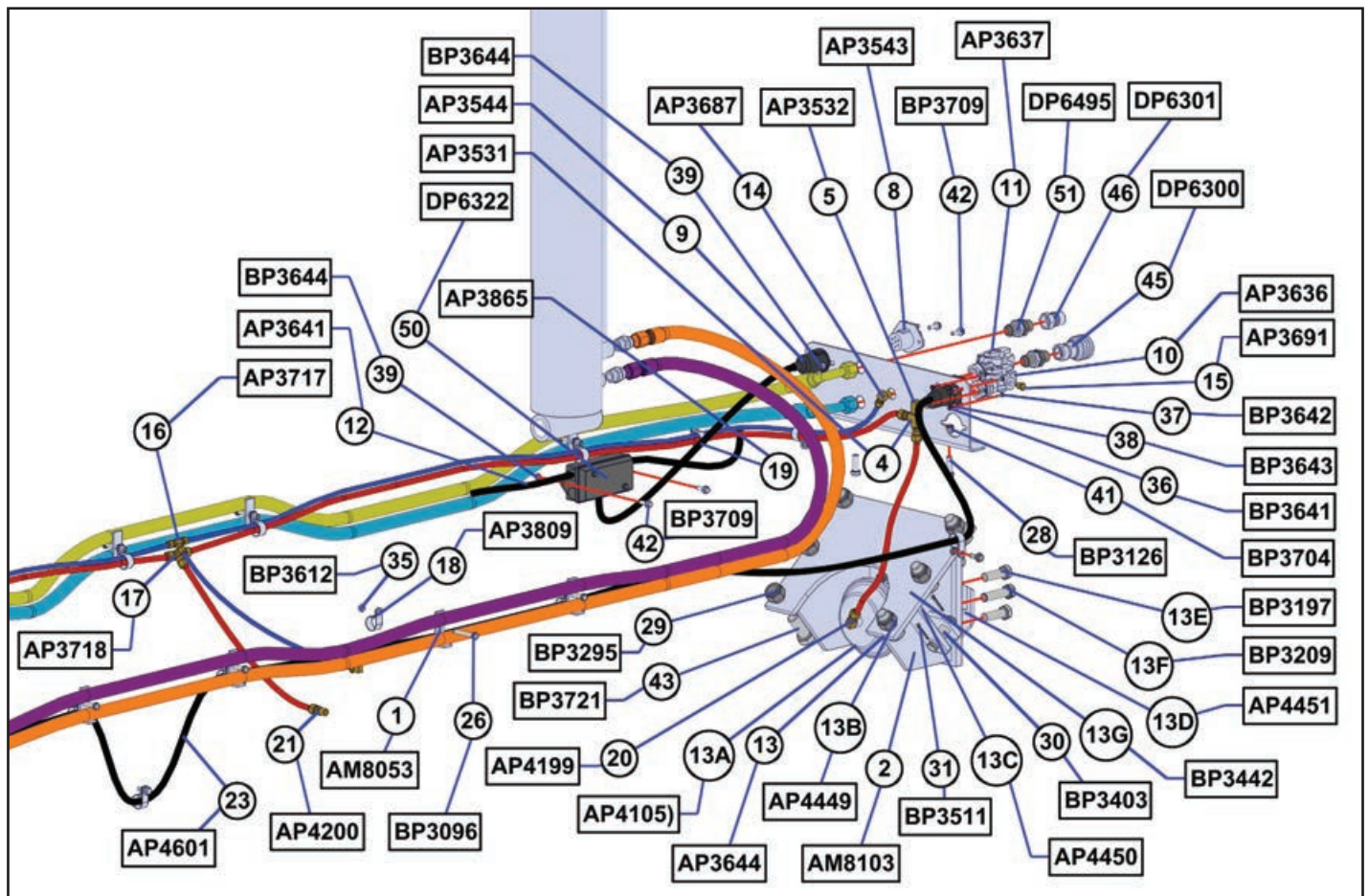
The second trailer has been shipped with a single trailer control box. This control box can be installed in any tractor and used to operate the second trailer as a single trailer. (NOTE: A tarp power wire will also have to be installed if the tarp is going to be used.)











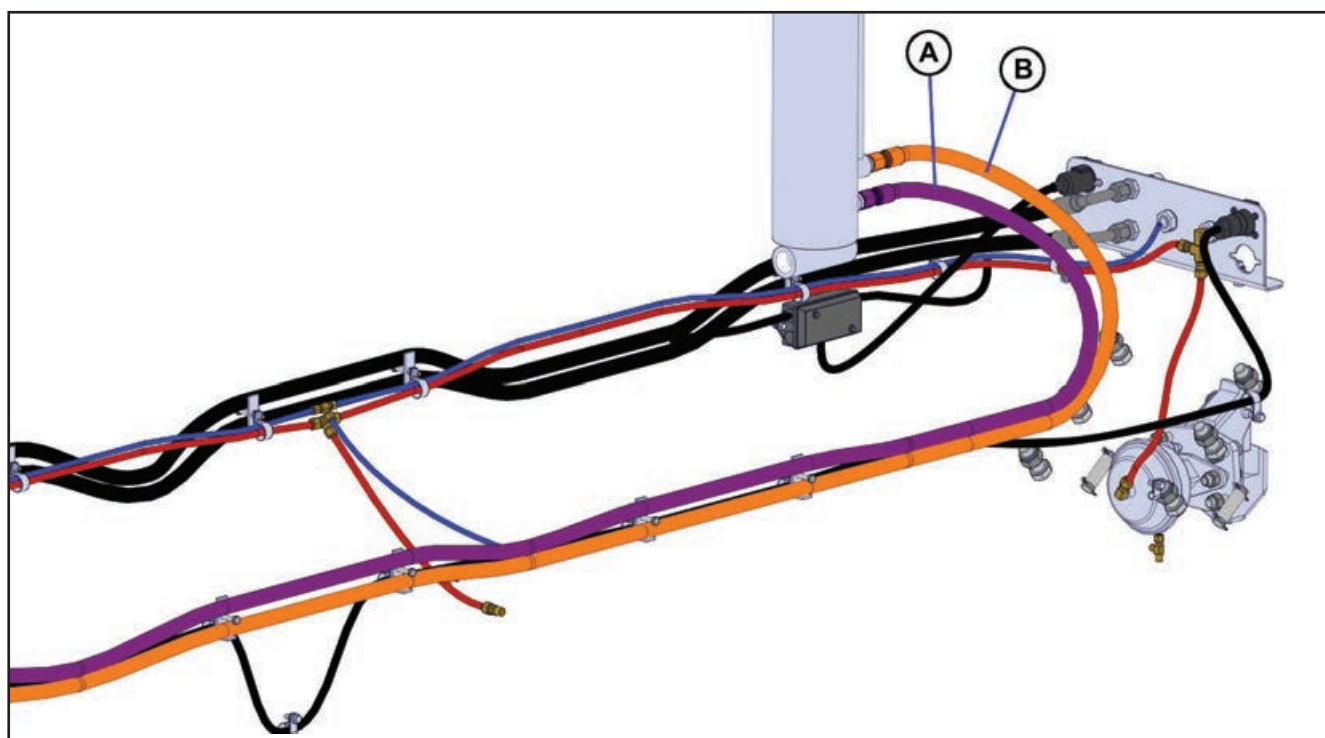
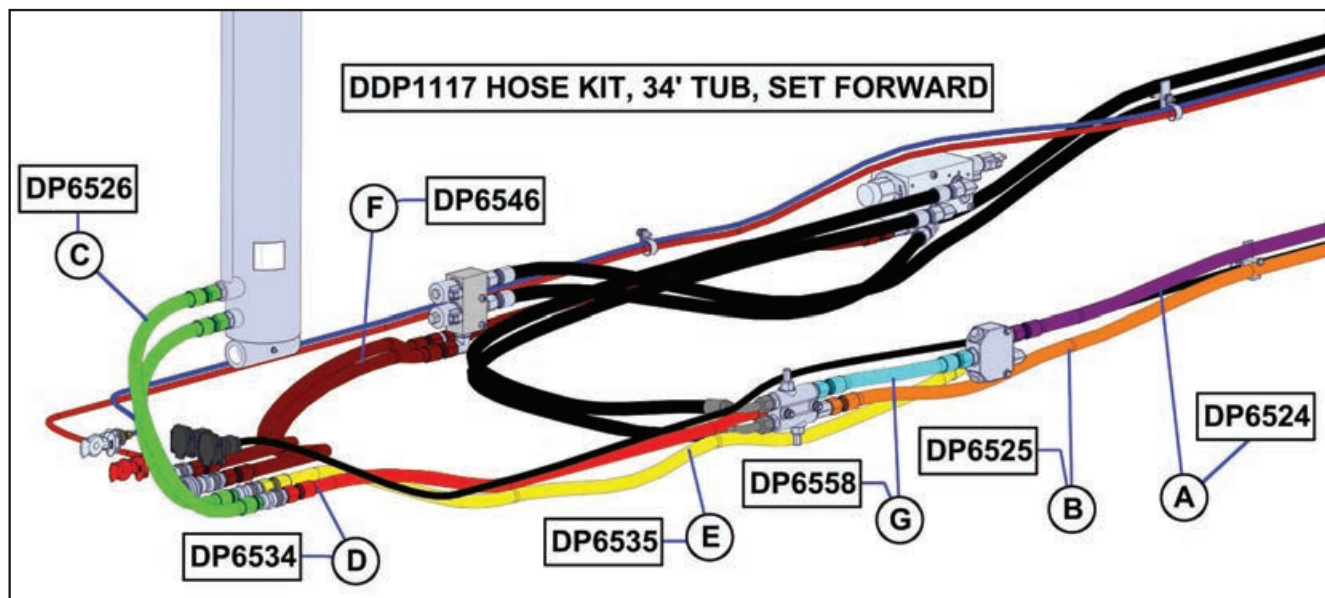
DEMCO	Hydraulic/Lead Trailer Package, Electric Over Hydraulic 34' Set Forward, 40' Chassis (090058) Parts
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BOM ID	Qty	Item No	Description
1	24	AM8053	HOSE RETAINER, SINGLE
2	1	AM8103	PINTLE HITCH MOUNT
3	2	AM9011	SPACER TUBE
4	1	AP3531	STREET TEE, 3/8", 90 DEGREES
5	1	AP3532	STREET ELBOW, 3/8", 90 DEGREES
6	1	AP3537	NYLON TUBING, RED, 1/2"
7	1	AP3538	NYLON TUBING, BLUE, 3/8"
8	1	AP3543	SOCKET, 7 WAY, TRAILER
9	1	AP 3544	WEATHERGUARD BOOT FOR 7-WAY PLUG
10	1	AP3636	GLADHAND, EMERGENCY, RED, W/ SHUTOFF
11	1	AP3637	GLADHAND, SERVICE, BLUE, W/ SHUTOFF
12	2	AP3641	WIRING HARNESS EXTENSION CORD
13	1	AP3644	PINTLE HOOK ASSEMBLY WITH AIR LOCK, PREMIER 2300A
13A	1	AP4105	AIR CHAMBER, TYPE 24
13B	1	AP4449	ADAPTER BRACKET, PREMIER #467, PINTLE HITCH
13C	1	AP4450	THIMBLE, PREMIER #271, PINTLE HITCH
13D	1	AP4451	PINTLE COUPLING, PREMIER 2300
13E	4	BP3197	HEX CAP SCREW, 3/4"-10 X 2-1/2", GRADE 8, PLATED
13F	2	BP3209	HEX CAP SCREW, 3/4"-10 X 3, GRADE 8, PLATED
13G	6	BP3442	NUT, HEX LOCK, 3/4"-10, TOP LOCK, GRADE C, PLATED
14	2	AP3687	ELBOW, 3/8" MP X 3/8" TUBE, 90, BRASS
15	1	AP3691	HEX PLUG, 1/4", BRASS
16	1	AP3717	TEE, UNION, 3/8" TUBE
17	1	AP3718	TEE, UNION, 1/2" TUBE
18	29	AP3809	1-1/4" HOSE SUPPORT CLAMP, 3/8" BOLT
19	1	AP3865	TRAILER CORD, 6-#12, 1-#10
20	1	AP4199	TUBE, 1/2" X 3/8" MP, 90, NUT & FERRULE, BRASS
21	3	AP4200	TUBE, 1/2" X 3/8" MP, STRT, NUT & FERRULE, BRASS
22	1	AP4543	VALVE, ELEC/HYD
22A	2	AP4553	COIL, 12V DC, HYDRAFORCE 4304012
22B	1	AP4554	COIL, 12V DC, HYDRAFORCE
22C	3	DP6538	ADAPTER, 12MJ-12MSAE 90, 6801-12
22D	1	DP6583	TEE, BRANCH, 12MSAE-12MJ-12MJ, 6803-12

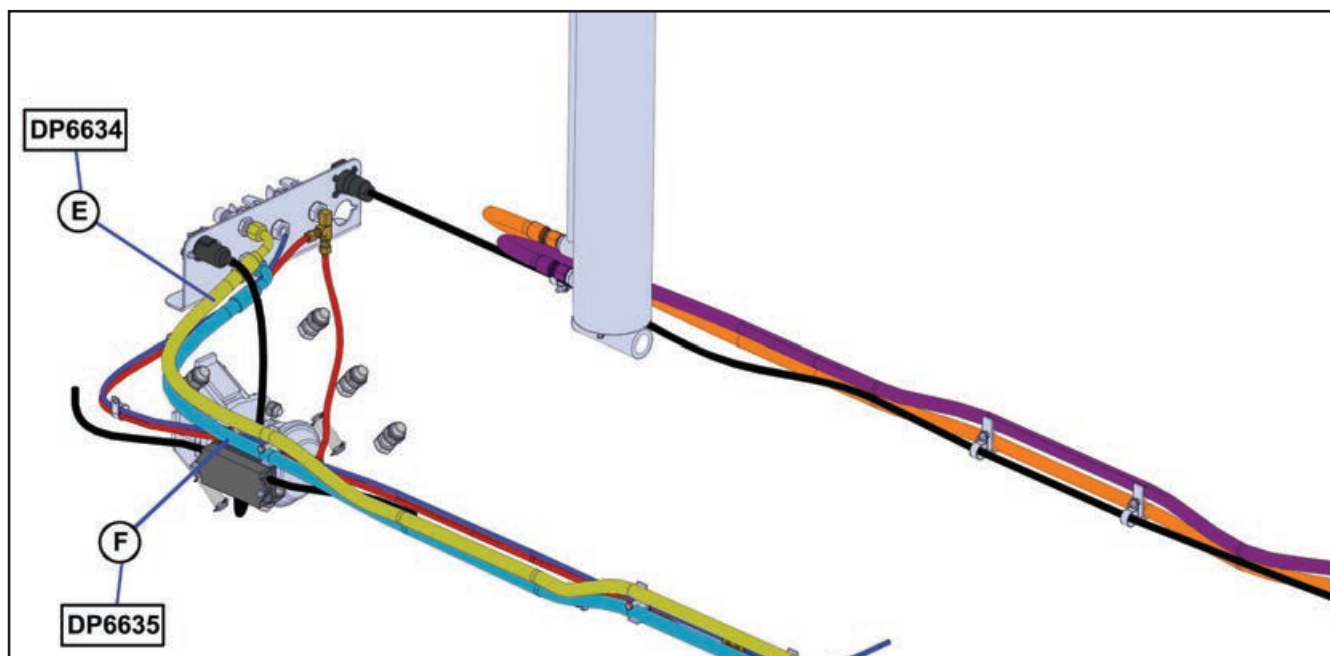
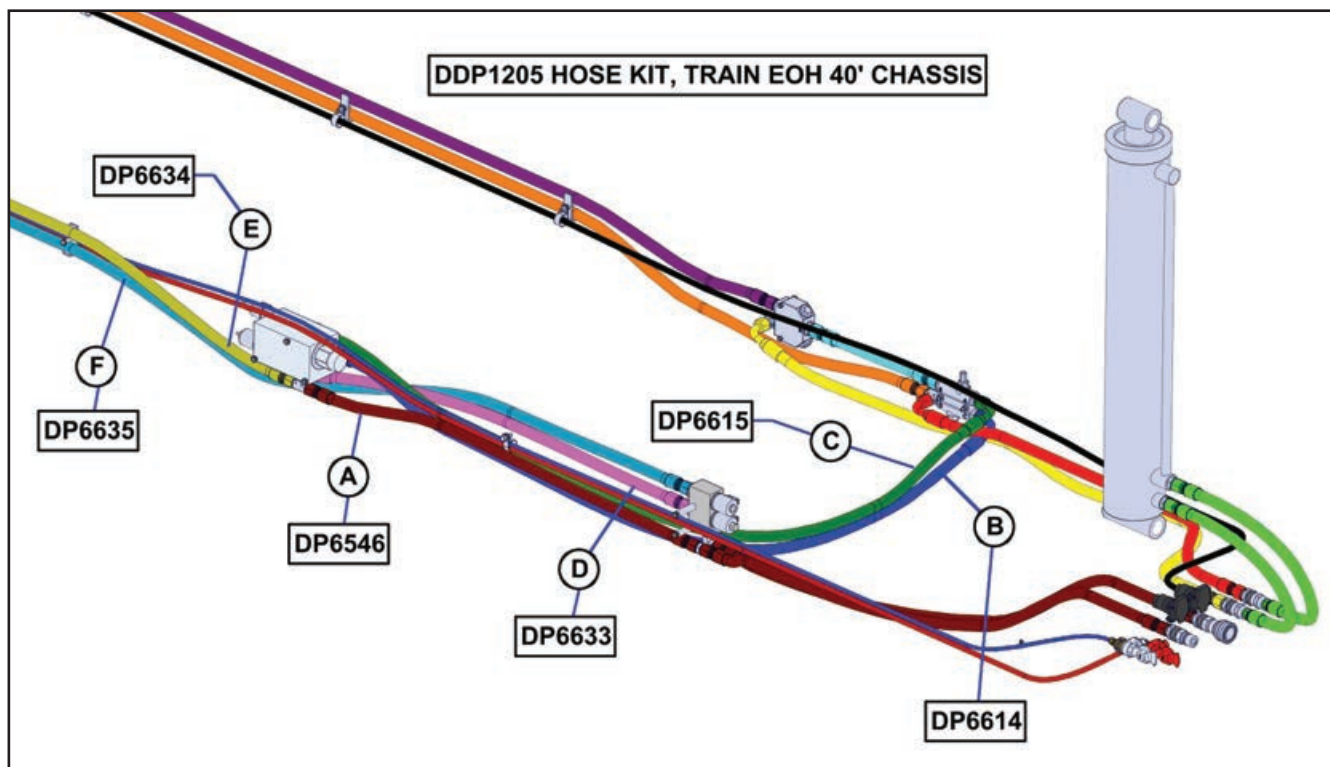


Hydraulic/Lead Trailer Package, Electric Over Hydraulic 34' Set Forward, 40' Chassis (090058) Parts

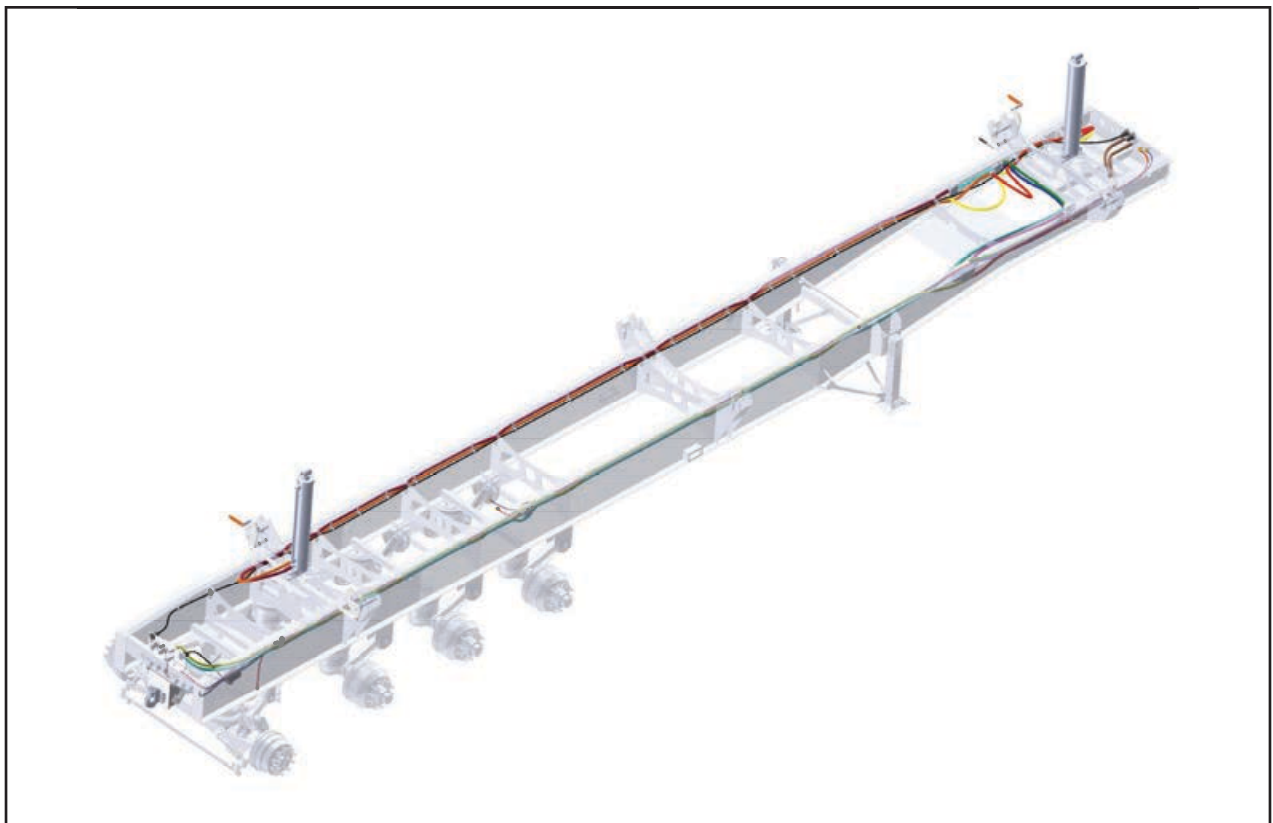
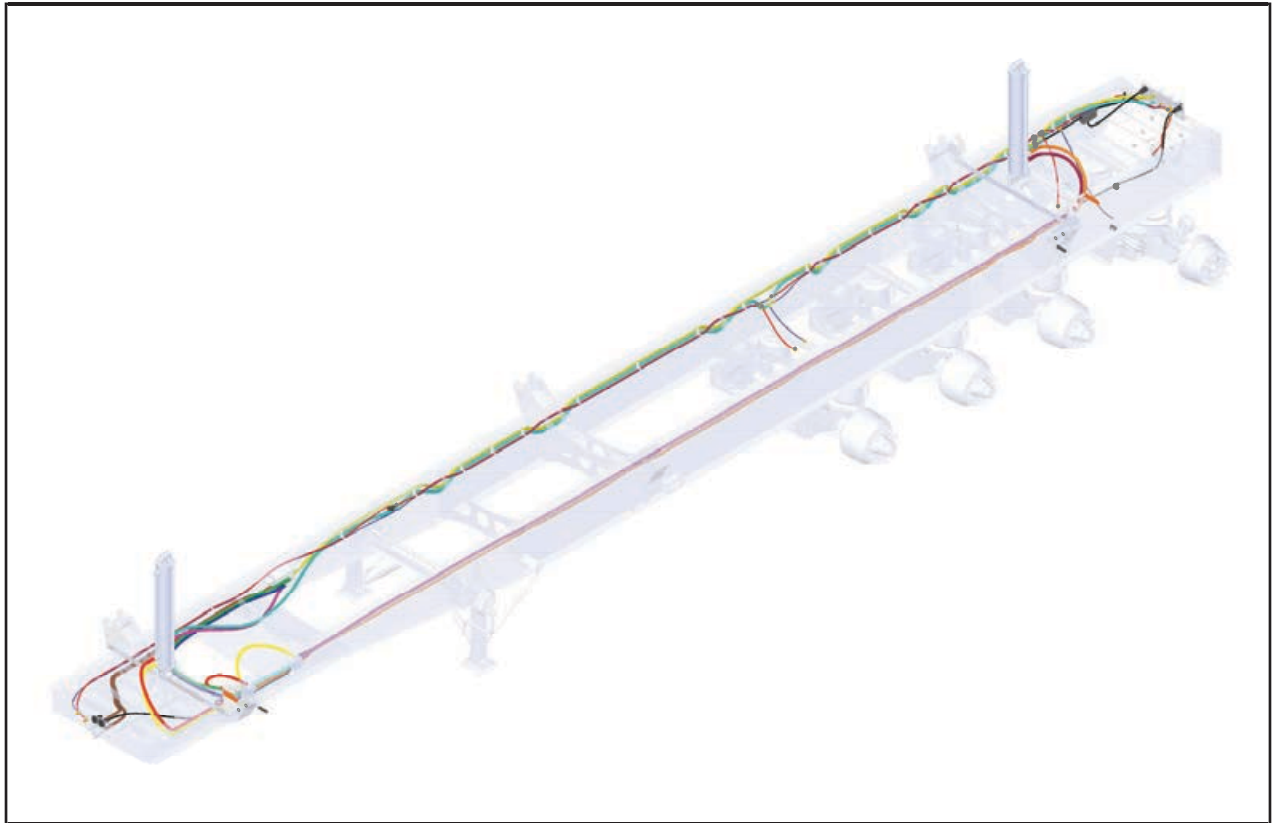
23	1	AP4601	WIRE HARNESS, SECOND TRAILER
24	1	AP4604	VALVE, SELECTOR, TRAIN EOH, 302-651
24A	2	AP4605	COIL, 10V DC, HYDRAFORCE, 4304110
24B	2	DP6561	ADAPTER, 12MJ-16MSAE, 6400-12-16
24C	1	DP6563	ADAPTER, 12MJ-16MSAE, 90, 6801-12-16
25	12	BP3055	WASHER, FLAT, 1/4", PLATED
26	24	BP3096	HEX CAP SCREW, 3/8"-16 X 2-1/2", GRADE 5, PLATED
27	5	BP3118	HEX CAP SCREW, 3/8"-16 X 5, GRADE 5, PLATED
28	2	BP3126	HEX CAP SCREW, 1/2"-13 X 1-1/2", GRADE 5, PLATED
29	6	BP3295	NUT, HEX LOCK, 1"-8, NYLOCK
30	2	BP3403	PIN, CLEVIS, 1" X 2-3/4" USEABLE
31	4	BP3511	PIN, COTTER, 3/16" X 1-3/4"
32	5	BP3587	NUT, HEX, 1/4" NYLOCK
33	2	BP3588	HEX CAP SCREW, 1/4"-20 X 3", GRADE 8, PLATED
34	2	BP3589	1/4"-20 x 2-1/2" GRADE 8
35	56	BP3612	NUT, HEX LOCK, 3/8"-16, TOP LOCK
36	12	BP3641	NUT, HEX LOCK, #10-24, NYLOCK
37	12	BP3642	PAN HEAD MACHINE SCREW, #10-24 X 3/4"
38	12	BP3643	WASHER, #10 USS FLAT Z
39	4	BP3644	NUT, HEX LOCK, 5/16"-18, TOP LOCK
40	4	BP3692	BOLT, FLNG HEAD, 3/8"-16 X 1, GRADE 8, PLATED
41	2	BP3704	NUT, LOCK, NYLON INSERT, 1/2"-13
42	4	BP3709	BOLT, FLNG HEAD, 5/16-18 X 1, GRADE 8, PLATED
43	6	BP3721	HEX CAP SCREW, 1"-8 X 2-1/2, GRADE 8, PLATED
44	1	DP4388	UNION, 12MJ-12MJ, 2403-12
45	2	DP6300	COUPLER, QUICK, FEMALE, 3/4" NPT
46	2	DP6301	COUPLER, QUICK, MALE, 3/4" NPT
47	1	DP6302	VALVE, DOUBLE RELIEF, PRINCE, H-L
48	1	DP6303	VALVE, PROPORTIONAL DIVIDER, PRINCE
49	2	DP6307	COUPLING, 12FP-12FP, 5000-12
50	1	DP6322	JUNCTION BOX
51	6	DP6495	BULKHEAD ADAPTER W/ NUT, 12MP-12MJ, 2706-LN-12-12
52	1	DP6538	ADAPTER, 12MJ-12MSAE 90, 6801-12
53	1	DP6557	TEE, 12MJ-12MSAE-12MJ, 6804-12

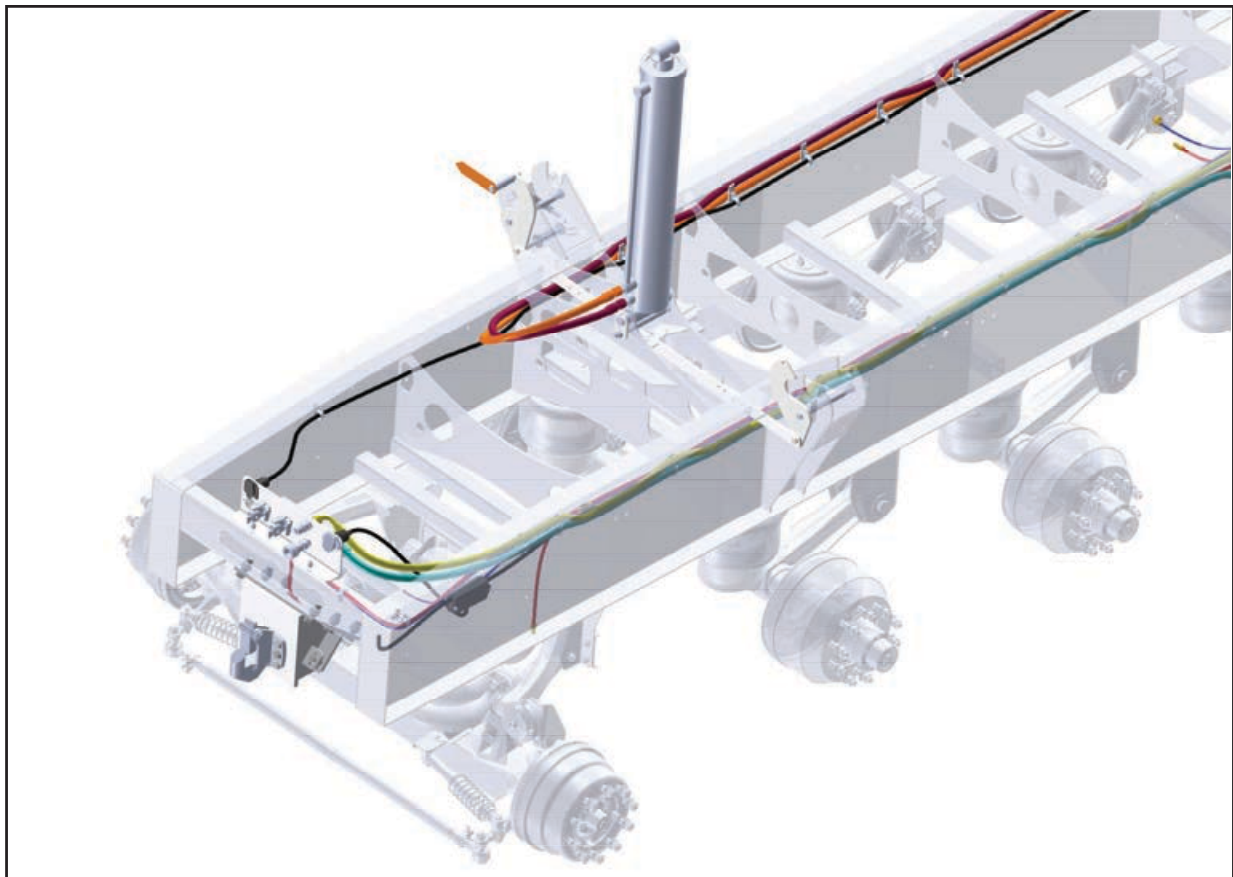
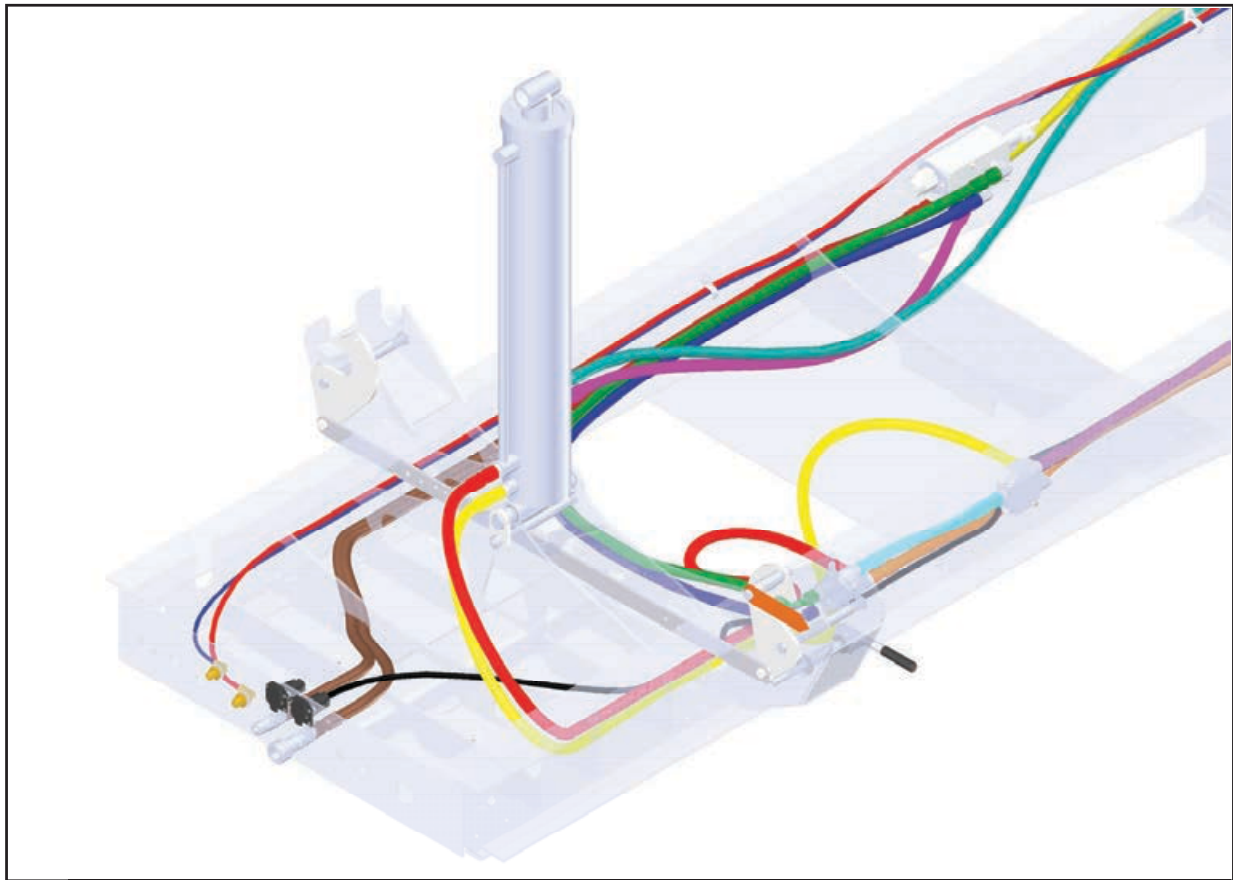


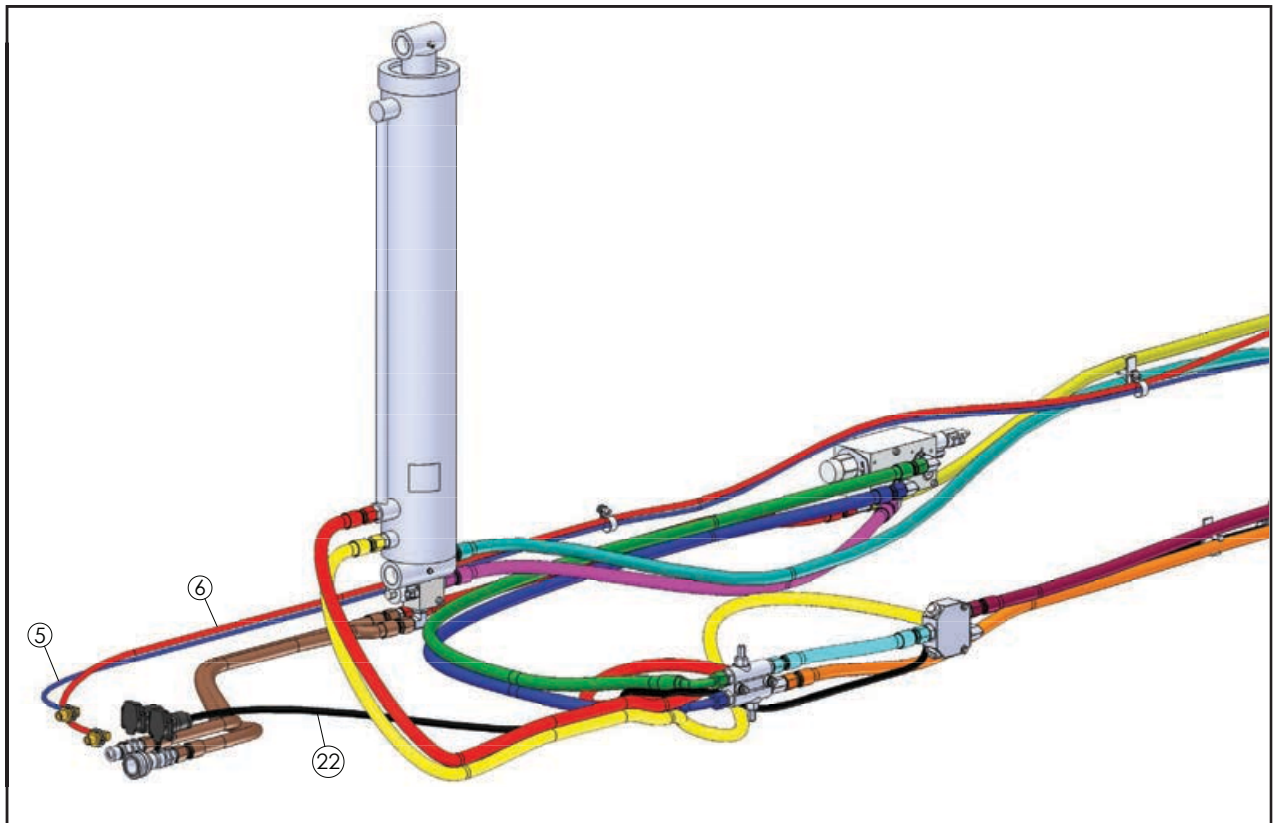
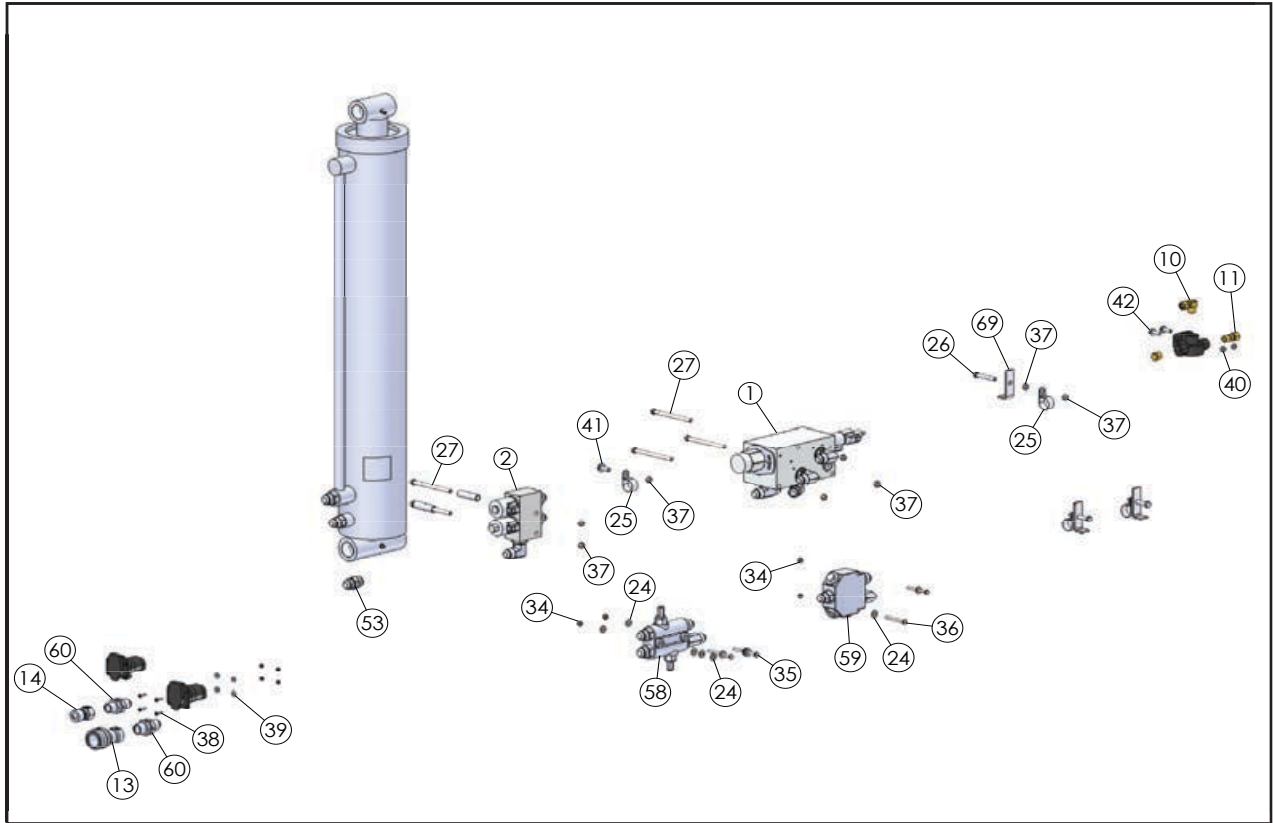
BOM ID	Qty	Item No	Description
A	1	DP6524	HOSE, HYD, 3/4 X 400", 12FJX-12FJX
B	1	DP6525	HOSE, HYD, 3/4 X 425", 12FJX-12FJX
C	2	DP6526	HOSE, HYD, 3/4 X 40", 12FJX-12MP
D	1	DP6534	HOSE, HYD, 3/4" X 62", 12FJX90-12FJX
E	1	DP6535	HOSE, HYD, 3/4" X 87", 12FJX90-12FJX
F	2	DP6546	HOSE, HYD, 3/4" X 57", 12FJX-12FJX
G	1	DP6558	HOSE, HYD, 3/4" X 18-1/2", 12FJX-12FJX

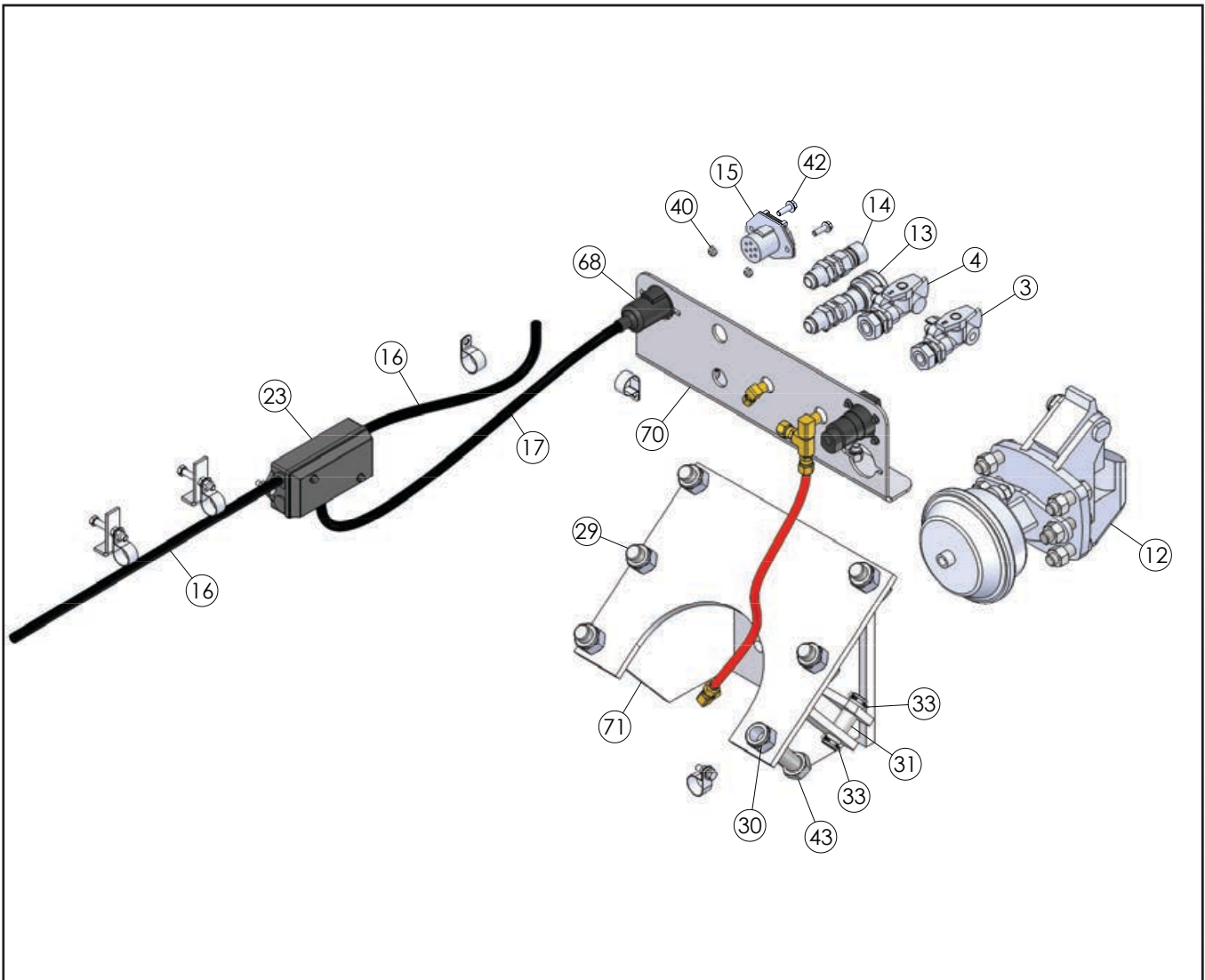


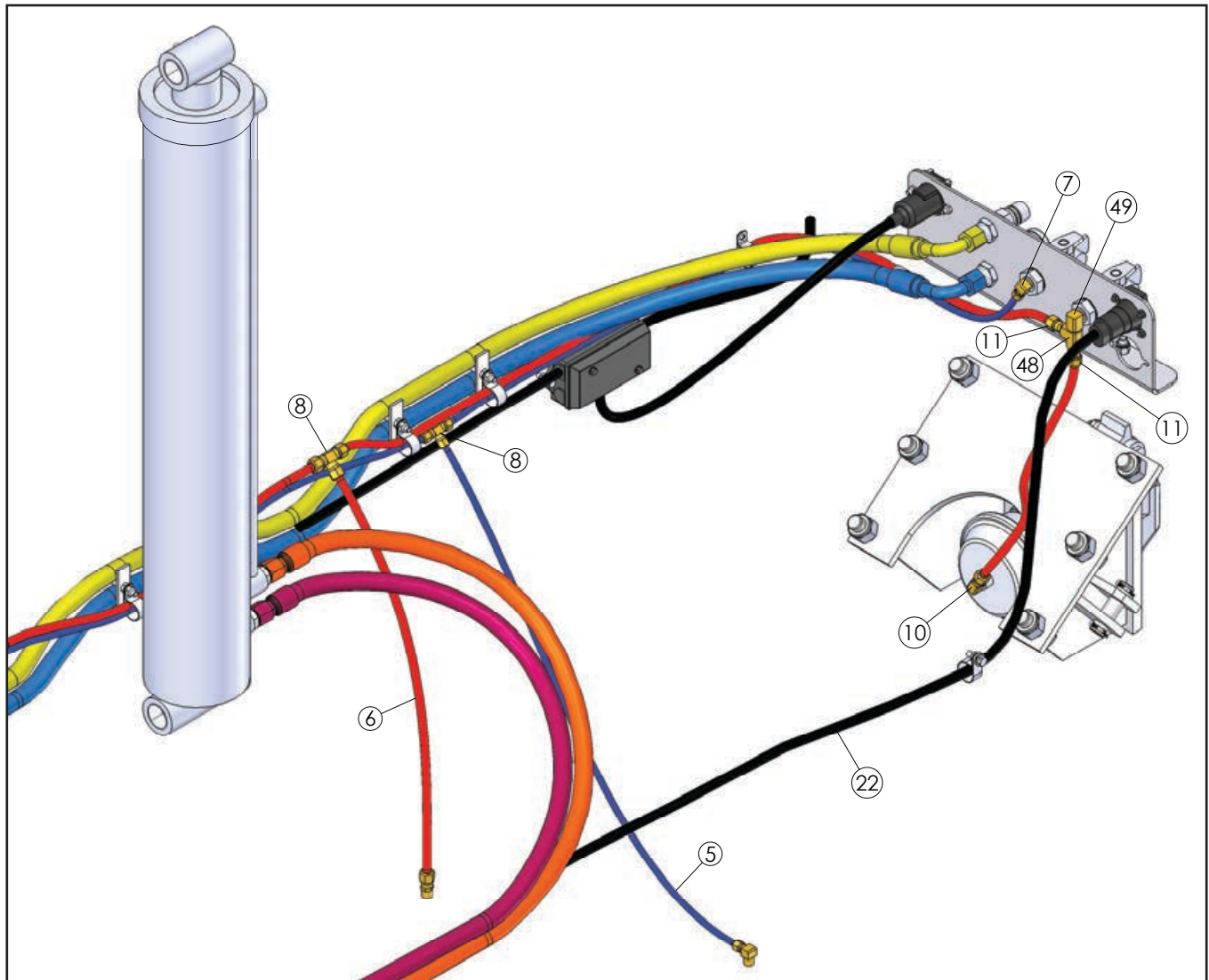
BOM ID	Qty	Item No	Description
A	1	DP6546	HOSE, HYD, 3/4" X 57", 12FJX-12FJX
B	1	DP6614	HOSE, HYD, 3/4" X 105", 12FFX-12FJX90
C	1	DP6615	HOSE, HYD, 3/4" X 108", 12FJX-12FJX90
D	1	DP6633	HOSE, HYD, 3/4" X 60", 12FJX-12FJX
E	1	DP6634	HOSE, HYD, 3/4" X 380", 12FJX-12FJX90
F	1	DP6635	HOSE, HYD, 3/4" X 440", 12FJX-12FJX90













Hydraulic/Lead Trailer Package, Electric Over Hydraulic 34' Set Forward, 44' Chassis (090060) Parts

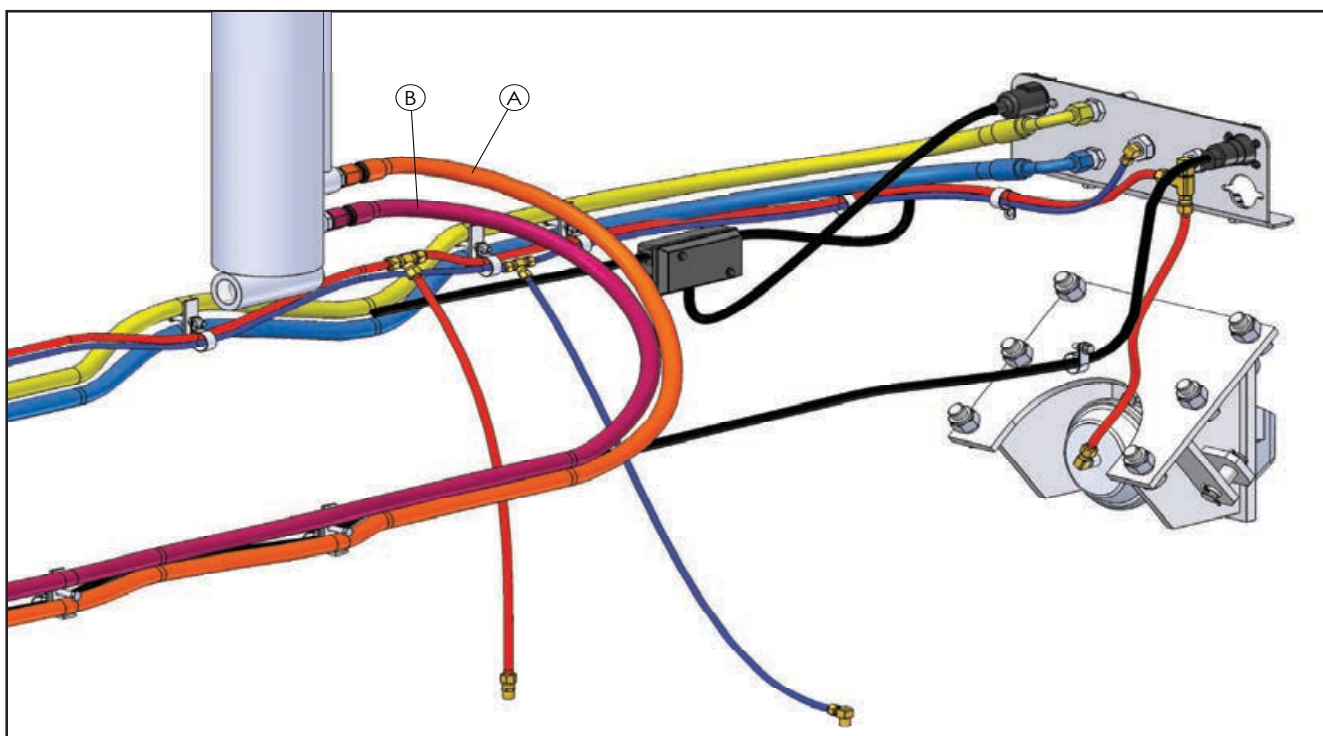
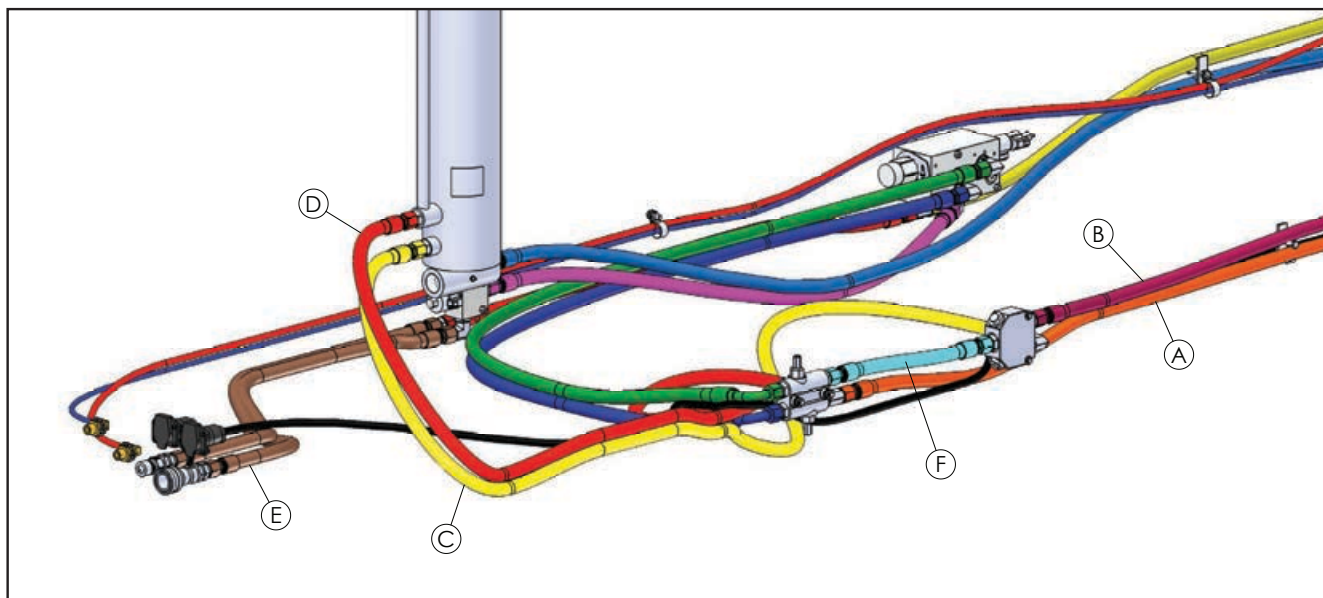
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1	1	EA	1AAAP4543	VALVE, EOH, TRAILERPRO
2	1	EA	1AAAP4604	VALVE, SELECTOR, TRAIN
3	1	EA	1AB0G0000E1	GLAD HAND W/VAVLE - EMERGENCY
4	1	EA	1AB0G0000S1	GLAD HAND W/VAVLE - SERVICE
5	13	FT	1AB0T0375B0	3/8" BRAKE LINE-BLUE
6	15	FT	1ABAP3537	NYLON TUBING, RED, 1/2"
7	1	EA	1ABAP3687	TUBE, 3/8" X 3/8 MP, 90*
8	1	EA	1ABAP3717	TEE, UNION, 3/8" TUBE
9	1	EA	1ABAP3718	TEE, UNION, 1/2" TUBE
10	1	EA	1ABAP4199	TUBE, 1/2 X 3/8 MP, 90,
11	2	EA	1ABAP4200	TUBE, 1/2 X 3/8 MP, STRT
12	1	EA	1ACAP3644	PINTLE HOOK ASS'Y WITH AIR LOCK, PREMIER 2300A
13	2	EA	1ACDP6300	COUPLER, QUICK, FEMALE, 3/4"
14	2	EA	1ACDP6301	COUPLER, QUICK, MALE, 3/4"
15	1	EA	1AEAP3543	SOCKET, 7 WAY TRAILER
16	1	EA	1AEAP3641	WIRING HARNESS EXTENSION CORD, TRI-AXLE TRAILERS
17	5	FT	1AEAP3865	WIRE, 6-#12, 1-#10 TRAILER CORD
18	21	EA	1AEAP4028	RING TERMINAL 12-10 WIRE GA 8-10 STUD
19	1	EA	1AEAP4600	WIRE HARNESS, LEAD TRAILER
20	1	EA	1AEAP4602	WIRE HARNESS, DOLLY EXT, 14'
21	1	EA	1AEAP4603	CONTROL BOX, TRAIN EOH,
22	1	EA	1AEAP4630	WIRE HARNESS, EXTENSION, 45', LEAD TO 2ND
23	1	EA	1AEDP6322	JUNCTION BOX
24	12	EA	1AF009D0000	1/4" FLAT WASHER
25	21	EA	1AFAP3809	1 1/4" HOSE SUPPORT CLAMP, 3/8" BOLT
26	28	EA	1AFBP3096	HEX CAP SCREW, 3/8"-16 X 2-1/2
27	5	EA	1AFBP3118	HEX CAP SCREW, 3/8"-16 X 5
28	4	EA	1AFBP3197	HEX CAP SCREW, 3/4"-10 X 2-1/2
29	2	EA	1AFBP3209	HEX CAP SCREW, 3/4"-10 X 3
30	6	EA	1AFBP3295	NUT, HEX LOCK, 1"-8, NYLOCK
31	2	EA	1AFBP3403	PIN, CLEVIS, 1 X 2-3/4 USEABLE
32	6	EA	1AFBP3442	NUT, HEX LOCK, 3/4"-10 TOP LOCK, GR. C, PLATED
33	4	EA	1AFBP3511	PIN, COTTER, 3/16 X 1-3/4
34	4	EA	1AFBP3587	NUT, HEX LOCK, 1/4"-20, NYLOCK
35	2	EA	1AFBP3588	HEX CAP SCREW, 1/4"-20 X 3, GR. 8, PLATED



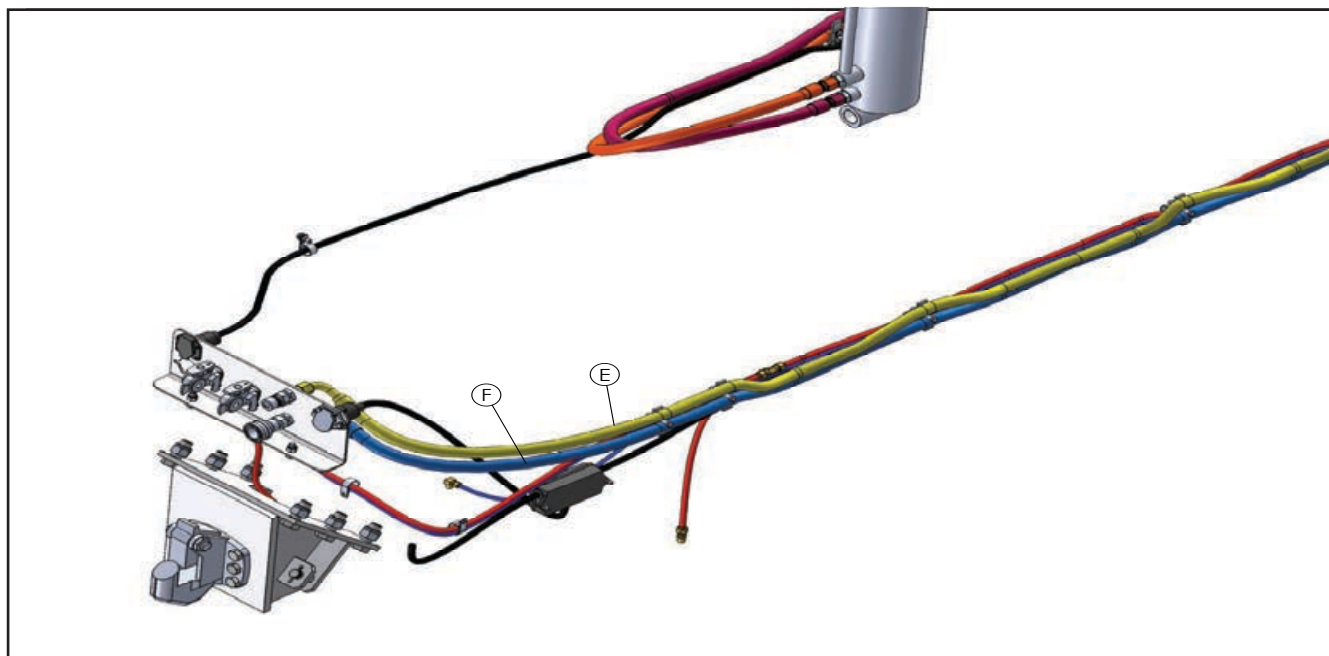
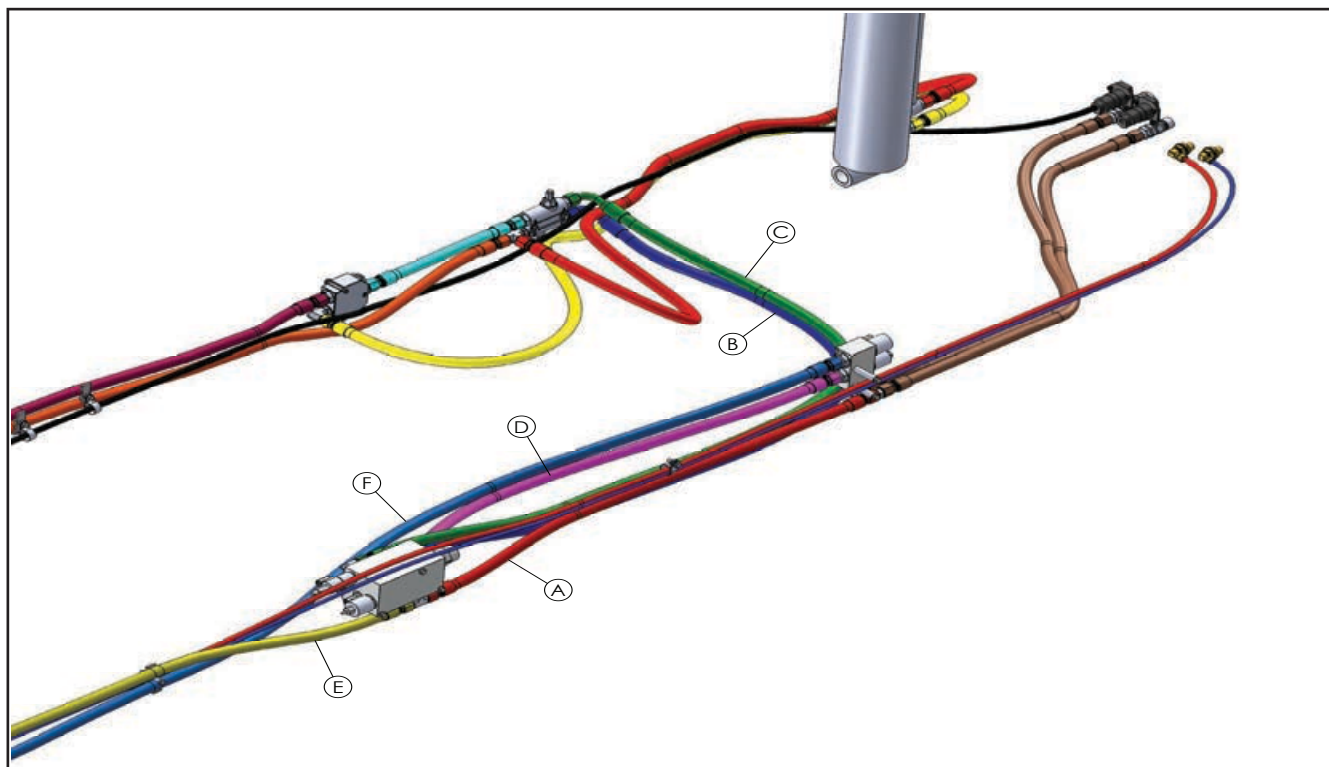
Hydraulic/Lead Trailer Package, Electric Over Hydraulic 34' Set Forward, 44' Chassis (090060) Parts

36	2	EA	1AFBP3589	HEX CAP SCREW, 1/4"-20 X 2-1/2. GR. 8, PLATED
37	63	EA	1AFBP3612	NUT, HEX LOCK, 3/8"-16 TOP-LOCK
38	12	EA	1AFBP3642	SCREW, PAN HEAD MACHINE, #10-24 X 3/4, PHILLIPS
39	12	EA	1AFBP3643	WASHER, #10 USS FLAT Z
40	4	EA	1AFBP3644	NUT, HEX LOCK, 5/16-18, TOP-LOCK
41	3	EA	1AFBP3692	BOLT, FLNG HEAD, 3/8"-16 X 1, GR. 8, PLATED
42	4	EA	1AFBP3709	BOLT, FLNG HEAD, 5/16"-18 X 1, GR. 8, PLATED
43	6	EA	1AFBP3721	HEX CAP SCREW, 1"-8 X 2-1/2, GR. 8, PLATED
44	2	EA	1AFC12HAAH0	1/2" X 1-1/2" HEX BOLT GR 5
45	12	EA	1AFC18C0000	#10-24 NYLON NUT
46	2	EA	1AFC18H0000	1/2 NYLON LOCKING NUT
47	12	EA	1AFDP4296	CABLE TIE 33"
48	1	EA	1AKAP3531	STREET TEE, 3/8"
49	1	EA	1AKAP3532	ST ELBOW, 3/8", 90'
50	1	EA	1AKD00TFH34	3/4" FEMALE RUBBER HYD CAP
51	1	EA	1AKDP4073	HOSE, HYD, 1/2" BULK, 8M3K
52	9	EA	1AKDP4368	ADAPTER, 12MJIC-12MSAE, STRAIGHT
53	1	EA	1AKDP4388	UNION, 12MJ-12MJ, 2403-12
54	2	EA	1AKDP4670	CABLE TIE 8", MARKING YELLOW, EXTEND
55	2	EA	1AKDP4671	CABLE TIE 8", MARKING YELLOW, RETRACT
56	1	EA	1AKDP4672	CABLE TIE 8", MARKING ORANGE, EXTEND
57	1	EA	1AKDP4673	CABLE TIE 8", MARKING ORANGE, RETRACT
58	1	EA	1AKDP6302	VALVE, DOUBLERELIEF, PRINCE, H-L
59	1	EA	1AKDP6303	VALVE, PROPORTIONAL DIVIDER, PRINCE
60	4	EA	1AKDP6495	BULKHEAD ADAPTER W/ NUT, 12MJ-12MP, 2706-LN-12-12
61	1	EA	1AKDP6538	ADAPTER, 12MJ-12MSAE 90*, 6801-12
62	1	EA	1AKDP6557	TEE, 12MJ-12MSAE-12MJ, 6804-12
63	1	EA	1AKDP6583	TEE, BRANCH, 12MSAE X, 12MJ-12MJ, STL, 6803-12
64	1	EA	1AKP00TMH34	3/4" MALE RUBBER HYD PLUG
65	1	EA	1AKPAAB0000	1/4 NPT HEX HEAD PLUG
66	1	EA	1AQAP4661	PRESSURE DECAL
67	1	EA	1AQAP4662	RETURN DECAL
68	1	EA	1ARAP3544	WEATHERGUARD BOOT FOR 7-WAY PLUG
69	28	EA	3CAM8053	HOSE RETAINER, SINGLE
70	1	EA	3CAM9440	HOSE MOUNT PLATE, TRAIN LEAD TRAILER
71	1	EA	5CAM8103	PINTLE HITCH MOUNT

Hydraulic/Lead Trailer Package, Electric Over Hydraulic 34' Set Forward, 44' Chassis (DDP1116) Hose Kit

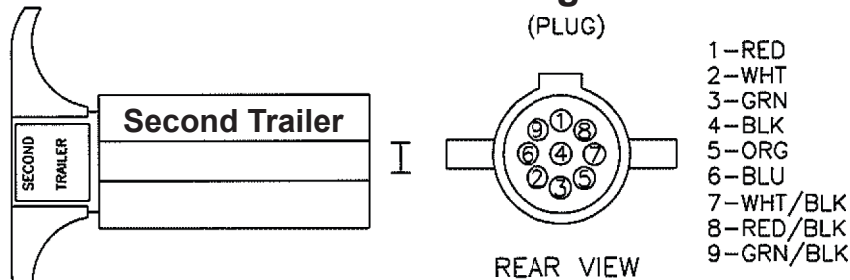


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B	1	DP6528	HOSE, HYD, 3/4 X 435", 12FJIC-12FJIC
C	1	DP6529	HOSE, HYD, 3/4 X 130", 12FJIC-12FJIC
D	1	DP6530	HOSE, HYD, 3/4 X 125", 12FJIC-12FJIC
E	2	DP6547	HOSE, HYD, 3/4" X 68", 12FJX-12FJX
F	1	DP6558	HOSE, HYD, 3/4 X 18-1/2", 12FJX-12FJX

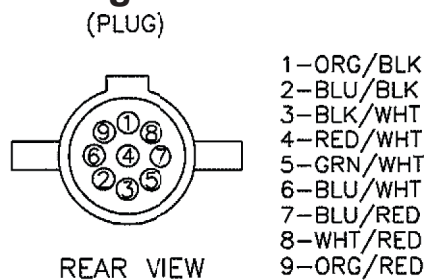


BOM ID	Qty	Item No	Description
A	1	DP6546	HOSE, HYD, 3/4" X 57", 12FJX-12FJX
B	1	DP6614	HOSE, HYD, 3/4" X 105", 12FFX-12FJX90
C	1	DP6615	HOSE, HYD, 3/4" X 108", 12FJX-12FJX90
D	1	DP6633	HOSE, HYD, 3/4" X 60", 12FJX-12FJX
E	1	DP6638	HOSE, HYD, 3/4" X 437", 12FJX-12FJX90
F	1	DP6639	HOSE, HYD, 3/4" X 497", 12FJX-12FJX90

Second Trailer Plug on Control Box Cord



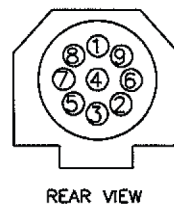
Lead Trailer Plug on Control Box Cord



Second Trailer Socket on Lead Trailer (Front and Rear)

Pin Out Detail

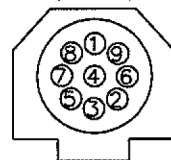
- 1-RED
- 2-WHT
- 3-GRN
- 4-BLK
- 5-ORG
- 6-BLU
- 7-WHT/BLK
- 8-RED/BLK
- 9-GRN/BLK



Lead Trailer Socket

PIN OUT DETAIL

(SOCKET)



- 1-RED (5CON)
- 2-WHT (5CON)
- 3-GRN (5CON)
- 4-BLK (5CON)+BLK(3CON)
- 5-ORG (5CON)
- 6-RED (2CON)
- 7-BLK (2CON)
- 8-WHT (3CON)
- 9-GRN (3CON)

NOTES

[illegible]



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