

Bendix ABS for Power Vehicles

Antilock and Traction Systems and Components.

Bendix EC-30 ABS

Pages 13-PWR-1 to 13-PWR-15



Gen 4 and Gen 5 ABS

(formerly marketed under the Eaton® brand name)

Pages 13-PWR-16 to 13-PWR-25



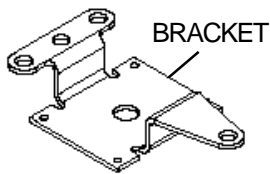


**EC-16 ANTILOCK
CONTROLLER**

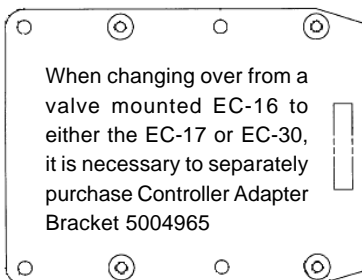


**EC-30 ANTILOCK
CONTROLLER
801236**

BRACKET KIT 800108



- Contains:
- 1 Bracket
 - 4 1/4"-20 Hex Nuts
 - 4 1/4"-20 Cap Screws



When changing over from a valve mounted EC-16 to either the EC-17 or EC-30, it is necessary to separately purchase Controller Adapter Bracket 5004965

**EC-16 to EC-17/EC-30
Controller Adapter
Bracket
5004965**

IMPORTANT NOTES

All EC-16 Electronic Controller part numbers are obsolete and replaced by a single EC-30 part number:

801236

Because the mounting hole spacing is different on the EC-30 the following must be considered:

1. When changing over from a valve mounted EC-16 to the EC-30, it is necessary to separately purchase Controller Adapter Bracket 5004965.
2. When changing over from a remote (bracket) mounted EC-16 to the EC-30, it is necessary to separately purchase bracket kit 800108.

EC-17 ANTILOCK CONTROLLER



CONNECTORS

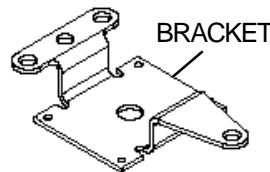


DIAGNOSTIC
WINDOW

EC-17 & EC-30 SERVICE REPLACEMENT PIECE NUMBERS				
Service Pc. No.	O.E.M.	With Brkt.	EC-30 (NOTE 1)	Comments
800886	GENERIC	NO	801236	GENERIC REPLACEMENT
800965	VOLVO	NO	801233	USE ON VOLVO VEHICLES
800966	VOLVO	YES	801233	USE ON VOLVO VEHICLES - REMOTE MOUNT WBRKT.
800967	GENERIC	YES	801236	GENERIC REPLACEMENT - REMOTE MOUNT WBRKT.
800976	GM	NO	801234	USE ON GM VEHICLES - 86 TOOTH TONE WHEEL
800977	GM	NO	801235	USE ON GM VEHICLES

Note 1: When replacing a remote mount EC-17 with an EC-30 equivalent, the remote mount bracket must be reused or bracket kit 800108 purchased separately.

BRACKET KIT 800108



Contains:

- 1 Bracket
- 4 1/4"-20 Hex Nuts
- 4 1/4"-20 Cap Screws

EC-17	EC-30
800275	801236
800276	801236
800293	801236
800294	801236
800301	801234
800392	801236
800400	801235
800401	801233
800402	801233
800558	801236
800582	801236
800623	801236
800624	801236
800860	801236
800886	801236
800965	801233
800966	801233

EC-17	EC-30
800967	801236
800971	801236
800976	801234
800977	801235
5002717	801235
5002718	801234
5002912	801236
5002913	801236
5002985	801236
5002986	801236
5003260	801236
5003919	801236
5003924	801236
5004038	801233
5004039	801233
5004149	801236

EC-17	EC-30
5004165	801236
5005023	801236
5005024	801236
5005025	801236
5005026	801236
5005027	801236
5006156	801236
5006314	801236
5008339	801236
5008352	801236
5008404	801236
5008405	801236
5008406	801236
5008407	801236
5008424	801236
5008687	801236

EC-17	EC-30
5008898	801233
5008899	801233
5008962	801236
5008970	801235
5008971	801234
5009024	801236
5009025	801236
5009027	801236
5009031	801235
5009032	801234
5009033	801236
5009036	801236
5009037	801236
5009038	801236
5009039	801236
5009053	801236



CONNECTORS

EC-30 ANTILOCK CONTROLLER

NOTE

The controller part number is found on the identification label attached to the edge of the housing and is lightly engraved on the top surface.



DIAGNOSTIC WINDOW

O.E. Pc. No.	Service Pc. No.	O.E. Customer	Customer Pc. No.
800854	801236		
5005927	801199 801202	GMT 560	15036467
5005928	801200 801203	GMT 560	15036466
5005929	801201 801204	GMT 560	15036465
5006796	801197	GMT 530	15752993
5006797	801198	GMT 530	15752992
5006819	801176	INTL. NGV	3548738C1
5007575	801176	INTL. NGV	3548737C1
5007720	801181	Petibone	62707081P
5007768	801225	VOLVO	20446234
5007769	801226 801225	VOLVO	20446235
5007772	801181	THOMAS	61201760
5007774	801181	Freightliner	
5007775	801181	MACK	7MN56BP2
5007776	801174	INTL.	3553413C1
5008189	801199	GMT 560	
5008190	801200	GMT 560	
5008191	801201	GMT 560	
5008376	801209 801212	GMT 560	15062790
5008377	801208 801211	GMT 560	15062791
5008378	801207 801210	GMT 560	15062792
5008379	801206	GMT 530	15062793
5008380	801205	GMT 530	15062794
5008470	801207	GMT 560	Generic
5008471	801208	GMT 560	Generic
5008472	801209	GMT 560	Generic
5008473	801233		Generic
5008474	801234		Generic
5008475	801235		Generic
5008476	801236		Generic
5008508	801197	GMC	
5008602	801180	FREIGHT	
5008603	801180	FREIGHT	
5008604	801181	FREIGHT	
5008605	801180	FREIGHT	
5008847	801167	INTL. NGV	3561247C1
5008848	801167	INTL. NGV	3561266C1
5008849	801173	INTL.	3560655C1
5008857	801227	VOLVO	20435372
5008858	801228 801227	VOLVO	20435373
5009026	801233	VOLVO	3099332
5009040	801236	FORD	YC3Z2C219AC
5009046	801233	VOLVO	
5009047	801235	GMC	
5009048	801234	GMC	
5009049	801236	Generic	Generic
5009050	801236	Generic	Generic
5009117	801026	Generic	Generic

O.E. Pc. No.	Service Pc. No.	O.E. Customer	Customer Pc. No.
5009118	801179	Generic	Generic
5009133	801236	NA	NA
5009173	801180	OTTAWA	90029231
5009190	801236	INTL.	8900075R91
5009204	801239	MACK	7MN56BP1
5009235	801180	Generic	Generic
5009236	801181	BLUE BIRD	36680
5009237	801174	Generic	Generic
5009238	801239	Generic	Generic
5009239	801173	Generic	Generic
5009240	801176	Generic	Generic
5009241	801176	Generic	Generic
5009242	801225	Generic	Generic
5009243	801197	Generic	Generic
5009244	801198	Generic	Generic
5009245	801205	Generic	Generic
5009246	801206	Generic	Generic
5009253	801177	Generic	Generic
5009299	801227	Generic	Generic
5009583	801180	MACK	7MN56BP3
5010174	801166	Navistar	3572460C1
5010175	801166	Navistar	3572461C1
5010176	801167	Navistar	3572462C1
5010177	801167	Navistar	3572463C1
5010178	801174	Navistar	3572398C1
5010179	801173	Navistar	3572398C1
5010292	801181	THOMAS	61201760
5010293	801181	THOMAS	61201760
5010294	801180	FREIGHT	
5010295	801180	FREIGHT	
5010296	801181	FREIGHT	
5010297	801180	FREIGHT	
5010301	801197	GMC	15166804
5010302	801198	GMC	15166805
5010303	801206	GMC	15166807
5010304	801205	GMC	15166806
5010305	801199 801202	GMC	15164779
5010306	801200 801203	GMC	15164778
5010307	801201 801204	GMC	15164777
5010308	801209 801212	GMC	15164780
5010309	801208 801211	GMC	15164781
5010310	801207 801210	GMC	15164782
5010314	801225	VOLVO	20462818
5010316	801227	VOLVO	20462817
5010318	801181	MACK	7MN56A & BP2
5010319	801239	MACK	7MN56B
5010320	801180	MACK	7MN56BP3
5010345	801181	NA	NA

Note: Controller service part numbers shown in **bold** are supplied with a bracket for remote mounting.

O.E. Pc. No.	Service Pc. No.	O.E. Customer	Customer Pc. No.
5010346	801202	NA	NA
5010347	801203	NA	NA
5010348	801204	NA	NA
5010349	801210	NA	NA
5010350	801211	NA	NA
5010351	801212	NA	NA
5010352	801233	NA	NA
5010353	801234	NA	NA
5010354	801235	NA	NA
5010355	801236	NA	NA
5010356	801237	NA	NA
5010357	801238	NA	NA
5010358	801180	OTTAWA	90029598
5010359	801180	OTTAWA	90029599
5010360	801181	BLUE BIRD	46009
5010362	801239	NA	NA
5010364	801166	NA	NA

O.E. Pc. No.	Service Pc. No.	O.E. Customer	Customer Pc. No.
5010366	801226	NA	NA
5010367	801197	NA	NA
5010368	801198	NA	NA
5010369	801205	NA	NA
5010370	801206	NA	NA
5010372	801228	NA	NA
5010382	800852	NA	NA
5010383	800853	NA	NA
5010429	801167	NA	NA
5010430	801173	NA	NA
5010465	801176	NA	NA
5010466	801177	NA	NA
5010467	801178	NA	NA
5010468	801179	NA	NA
5011096	801333	NA	NA
5011100	801334	NAVISTAR	3572398C2
5011102	801335	NA	NA

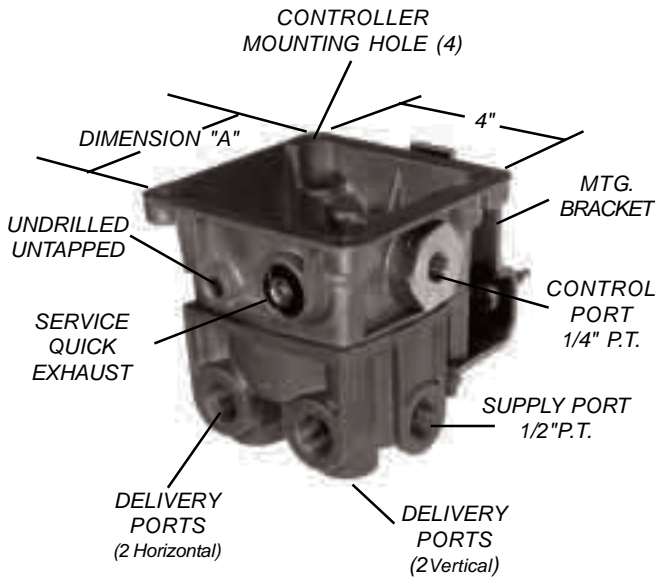
Service Replacements

Service Pc. No.	Traction Control ¹	Sensors Modulators ²	Communication Protocol	Blink Code ³	Power Line Carrier	Comment
801166	EL, DB	4 X 4	J1587, J1939			
801167	EL, DB	4 X 4	J1587, J1939		Y	
801173	EL, DB	6 X 4	J1587, J1939	Y	Y	
801174	EL, DB	6 X 4	J1587, J1939	Y		
801176	EL, DB	4 X 4	J1587, J1939			
801177	EL, DB	4 X 4	J1587, J1939		Y	
801178	EL, DB	4 X 4	J1587, J1939	Y		
801179	EL, DB	4 X 4	J1587, J1939	Y	Y	
801180	EL, DB	6 X 4	J1587, J1939	Y	Y	
801181	EL, DB	6 X 4	J1587, J1939	Y		
801197	NONE	4 X 4	J1587, J1939	Y	Y	
801198	NONE	4 X 4	J1587, J1939	Y	Y	86 TOOTH
801199	DB	6 X 4	J1587, J1939	Y	Y	W/BRKT.
801200	DB	4 X 4	J1587, J1939	Y	Y	W/BRKT.
801201	NONE	4 X 4	J1587, J1939	Y	Y	W/BRKT.
801202	DB	6 X 4	J1587, J1939	Y	Y	
801203	DB	4 X 4	J1587, J1939	Y	Y	
801204	NONE	4 X 4	J1587, J1939	Y	Y	
801205	NONE	4 X 4	J1587, J1939	Y		
801206	NONE	4 X 4	J1587, J1939	Y		86 TOOTH
801207	DB	6 X 4	J1587, J1939	Y		W/BRKT.
801208	DB	4 X 4	J1587, J1939	Y		W/BRKT.
801209	NONE	4 X 4	J1587, J1939	Y		W/BRKT.
801210	DB	6 X 4	J1587, J1939	Y		
801211	DB	4 X 4	J1587, J1939	Y		
801212	NONE	4 X 4	J1587, J1939	Y		
801225	EL, DB	6 X 4	J1587, J1939	Y		
801226	EL, DB	6 X 4	J1587, J1939	Y		W/BRKT.
801227	EL, DB	6 X 4	J1587, J1939	Y	Y	
801228	EL, DB	6 X 4	J1587, J1939	Y	Y	W/BRKT.
801233	EL, DB	6 X 4	J1587, J1939, J1922	Y		
801234	EL, DB	6 X 4	J1587, J1939, J1922	Y		86 TOOTH
801235	EL, DB	6 X 4	J1587, J1939, J1922	Y		
801236	EL, DB	6 X 4	J1587, J1939, J1922	Y		
801237	NONE	4 X 4	J1587, J1939	Y		
801238	NONE	4 X 4	J1587, J1939	Y	Y	
801239	EL, DB	6 X 4	J1587, J1939	Y	Y	
801333	NONE	4 X 4	J1587, J1939	Y		
801334	EL, DB	6 X 4	J1587, J1939	Y	Y	
801335	EL, DB	6 X 4	J1587, J1939	Y		

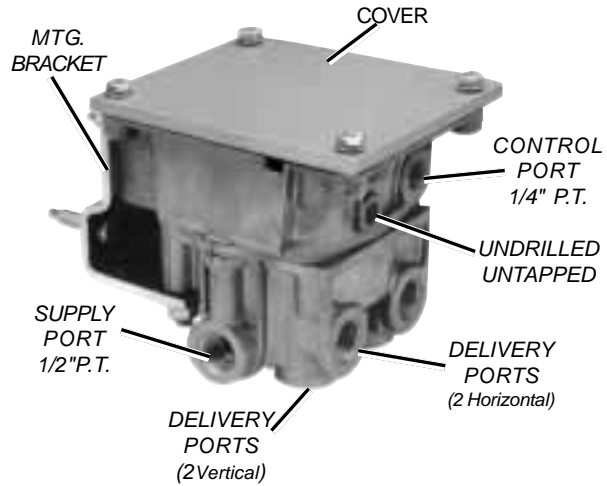
Note 1: "EL" = Engine Limiting feature - "DB" = Differential Braking feature.

Note 2: Number of Speed Sensors presented first Modulators second.

Note 3: Blink Code for troubleshooting is programmed into controller.

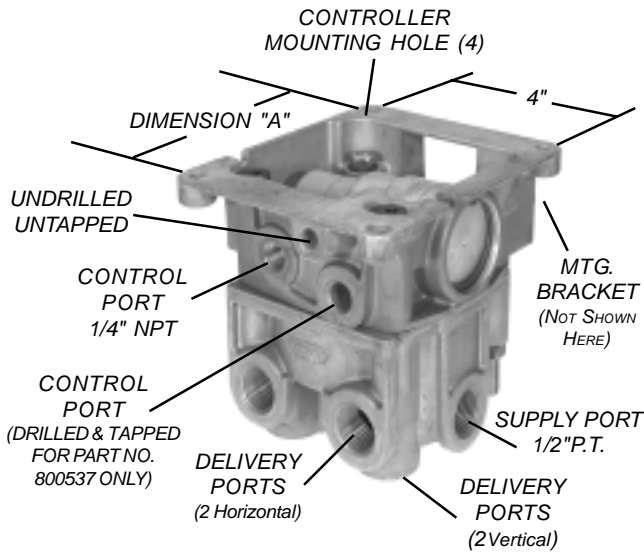


Valve Style A



Valve Style B

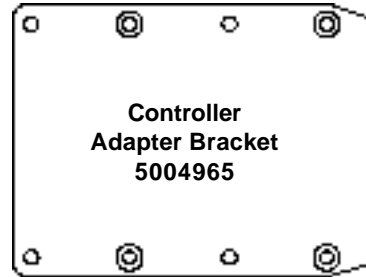
REMOTE MOUNT AR-1
THE REMOTE MOUNT AR-1 IS MOUNTED SEPARATE FROM THE ANTILOCK CONTROLLER AND UTILIZES A COVER. NO QUICK EXHAUST FUNCTION IS INCORPORATED.



Valve Style C

SERVICE REPLACEMENTS

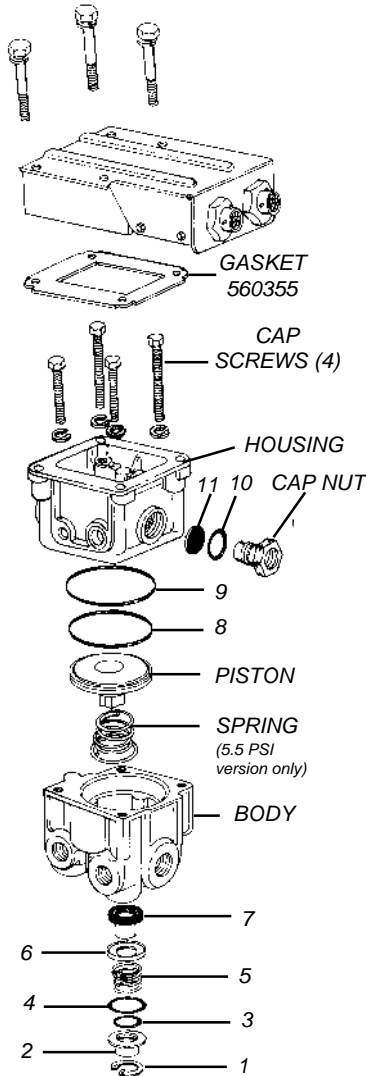
AR-1 CHANGEOVER	
O.E.M. Part No.	Service Part No.
108472	65327
108638	65360
108910	65404
109350	65501
109365	800179
5001282	800297
5001703	800163
5002213	800163
5004152	800398
5004607	800466
5005139	800537
5006081	800605



Controller Adapter Bracket
AR-1 valves that have an "A" dimension of 4.9 inches were originally used with the EC-16 controller. When replacing an EC-16 with an EC-17 or EC-30 controller on these valves this adapter must be purchased separately since the mounting holes are spaced differently.

Serv. Pc. No.	Valve Style	Delivery Port		Crack Press.	Mtg. Brkt.	Dim. "A"	Maint. Kit	Comments
		Horiz.	Vert.					
65327	A	2-1/2" NPT	---	4 PSI	5001656	4"	102802	
65360	A	2-3/8" NPT	2-3/8" NPT	4 PSI	5001656	4"	102802	
65404	A	2-1/2" NPT	---	5.5 PSI	5001656	4"	102802	
65501	A	2-1/2" NPT	N/A	4 PSI	108473	4"	102802	NO VERTICAL PORTS
800163	B	2-1/2" NPT	---	4 PSI	5001657	4.9"	109368	
800398	B	2-1/2" NPT	---	5.5 PSI	5001657	4.9"	109368	
800179	C	2-1/2" NPT	---	4 PSI	5001657	4.9"	109368	
800297	C	2-1/2" NPT	---	4 PSI	N/A	4.9"	109368	FORD
800466	C	2-1/2" NPT	---	5.5 PSI	5001657	4.9"	109368	
800537	C	2-1/2" NPT	---	4 PSI	5001657	4.9"	5005138	AR-1DC - SEE NOTE 1
800605	C	2-1/2" NPT	2-3/8" NPT	4 PSI	N/A	4.9"	109368	FORD
800387	C	2-1/2" NPT	---	4 PSI	5001657	4.9"	109368	
800388	C	2-1/2" NPT	---	5.5 PSI	5001657	4.9"	109368	

Note 1 - Control Ports 41 and 42 drilled and tapped

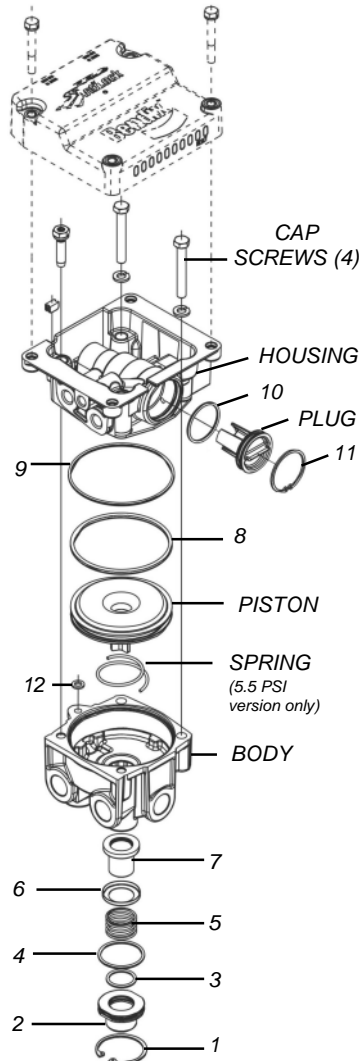


MAINTENANCE KIT 102802

CONTAINS THE FOLLOWING PARTS KEYED TO THE ILLUSTRATION ABOVE:

KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	O-RING
11	1	DIAPHRAGM

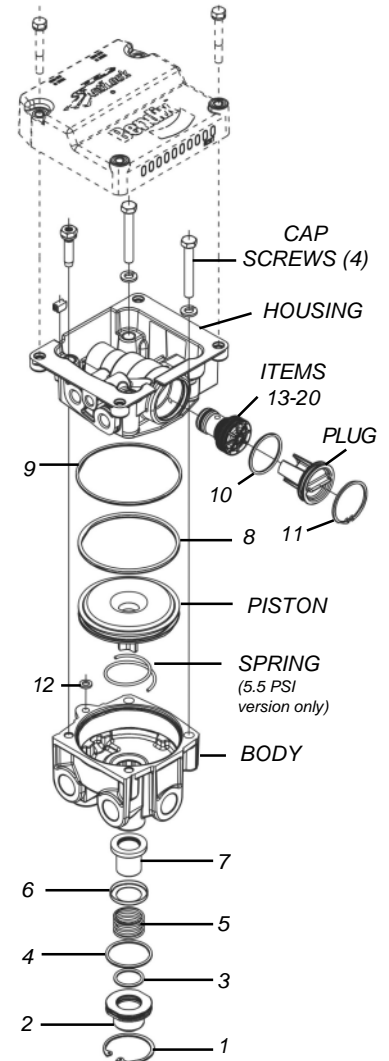
NOTE: GASKET 560355 MUST BE PURCHASED SEPARATELY.



MAINTENANCE KIT 109368

CONTAINS THE FOLLOWING PARTS KEYED TO THE ILLUSTRATION ABOVE:

KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	O-RING
11	1	RETAINING RING
12	1	SEALING RING



MAINTENANCE KIT 5005138

CONTAINS THE FOLLOWING PARTS KEYED TO THE ILLUSTRATION ABOVE:

KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	O-RING
11	1	RETAINING RING
12	1	SEALING RING
13	1	CHECK VALVE
14	2	CHK VLV GUIDE
15	1	O-RING
16	1	O-RING
17	1	SPRING
18	1	O-RING
19	1	O-RING
20	1	O-RING

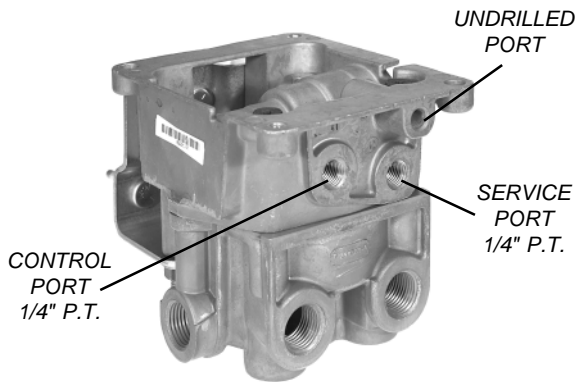
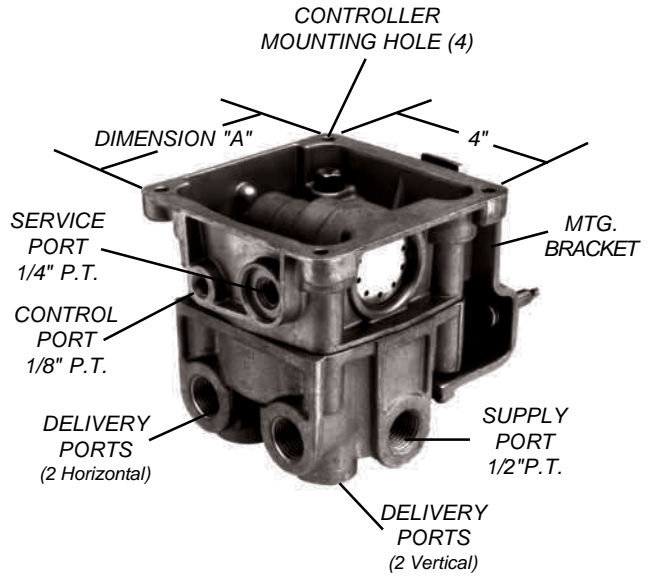
NOTE

DETAIL PARTS OTHER THAN THOSE SHOWN ARE NOT AVAILABLE FOR SERVICE.

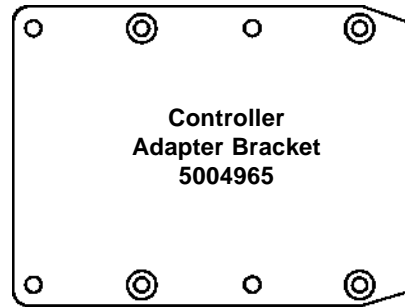
BRAKE
PROPORTIONING
EXHAUST



VIEW 1
FOR PART NOS.
65330 & 65364



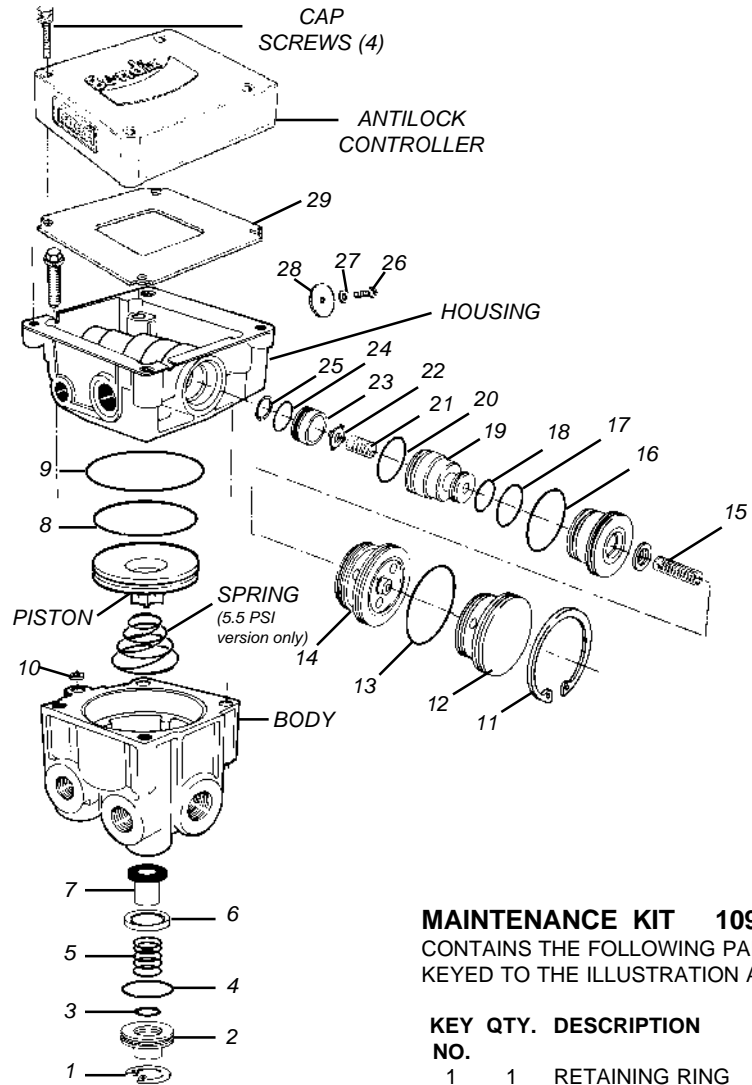
VIEW 2
FOR PART NOS.
800186, 800187
800299, 801035



**Controller
Adapter Bracket**
AR-1 valves that have an "A" dimension of 4.9 inches were originally used with the EC-16 controller. When replacing an EC-16 with an EC-17 or EC-30 controller on these valves this adapter must be purchased separately since the mounting holes are spaced differently.

AR-2 ANTILOCK RELAY ASSEMBLY							
Serv. Pc. No.	Delivery Port		Crack Press.	Mtg. Brkt.	Dim. "A"	Maint. Kit	Comments
	Horiz.	Vert.					
065330	1/2" PT	---	4 psi	5001656	4.0"	106932	VIEW 1
065364	1/2" PT	---	5.5 psi	5001656	4.0"	106932	VIEW 1
800186	1/2" PT	---	4 psi	5001657	4.9"	109359	VIEW 2
800187	1/2" PT	---	5.5 psi	5001657	4.9"	109359	VIEW 2
800299	1/2" PT	---	4 psi	N/A	4.9"	109359	VIEW 2
801035	1/2" PT	3/8" PT	4 psi	N/A	4.9"	109359	VIEW 2

AR-2 CHANGEOVER	
Pc. No.	Service Pc. No.
108520	065330
108909	065364
109366	800186
109931	800186
5001286	800299
5009174	801035



NOTE
Detail parts other than those shown are not available for service.

MAINTENANCE KIT 106932
CONTAINS THE FOLLOWING PARTS
KEYED TO THE ILLUSTRATION ABOVE:

KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	SEALING RING
11	1	RETAINING RING
12	1	EXHAUST PISTON
13	1	O-RING
14	1	SERVICE PISTON
15	1	SPRING
16	1	O-RING
17	1	O-RING
18	1	O-RING
19	1	PROPO. PISTON
20	1	O-RING
21	1	SPRING
22	1	VALVE
23	1	VALVE SEAT
24	1	O-RING
25	1	RETAINING RING
26	1	#6 THD ROLL SCR
27	1	WASHER
28	1	EXHAUST DIA.
29	1	GASKET

MAINTENANCE KIT 109359
CONTAINS THE FOLLOWING PARTS
KEYED TO THE ILLUSTRATION ABOVE:

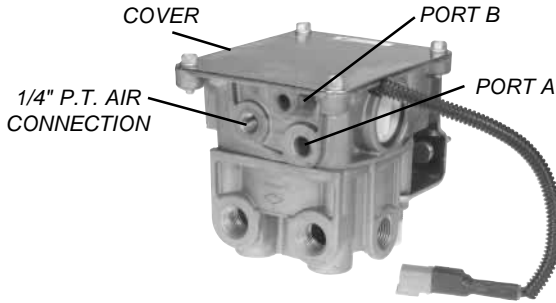
KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	SEALING RING
11	1	RETAINING RING
13	1	O-RING
15	1	SPRING
16	1	O-RING
17	1	O-RING
18	1	O-RING
20	1	O-RING
21	1	SPRING
22	1	VALVE
24	1	O-RING
25	1	RETAINING RING

NOTE:
Key numbers 12, 14, 19, 23 and 26-29 not included in this kit.

CATALOG 13-PWR-10

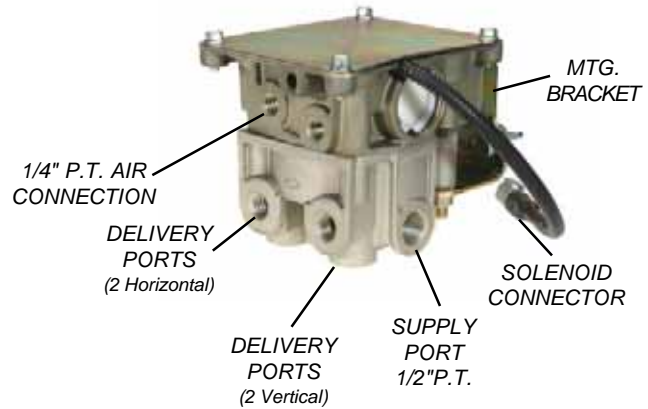
Antilock

ATR-1 Antilock Traction Relay



REMOTE MOUNT ATR-1

The remote mount version of the ATR-1 is designed to be mounted separate from the AntiLock/Traction controller and utilizes a cover. Service Replacement units without a cover are not intended for remote mounting.



ATR-1 CHANGEOVER	
O.E. Pc. No.	Service Pc. No.
550698	65516
5000335	800030
5000436	800040
5000437	800041
5000438	800040
5000439	800041
5001090	800096
5001091	800096
5001275	800298
5001966	800041
5002211	800030
5003413	800335

ATR-1 CHANGEOVER	
O.E. Pc. No.	Service Pc. No.
5003921	800030
5004569	800463
5004571	800463
5004588	800465
5004589	800465
5004906	800504
5004959	800465
5004969	800465
5004977	800463
5005041	800541
5005193	800541
5005673	800463

ATR-1 CHANGEOVER	
O.E. Pc. No.	Service Pc. No.
5006038	800609
5006039	800609
5006043	800465
5006044	800609
5006401	800642
5006402	800542
5006404	800643
5006405	800643
5006674	801086
5006675	801118
5006907	800692
5006908	800692

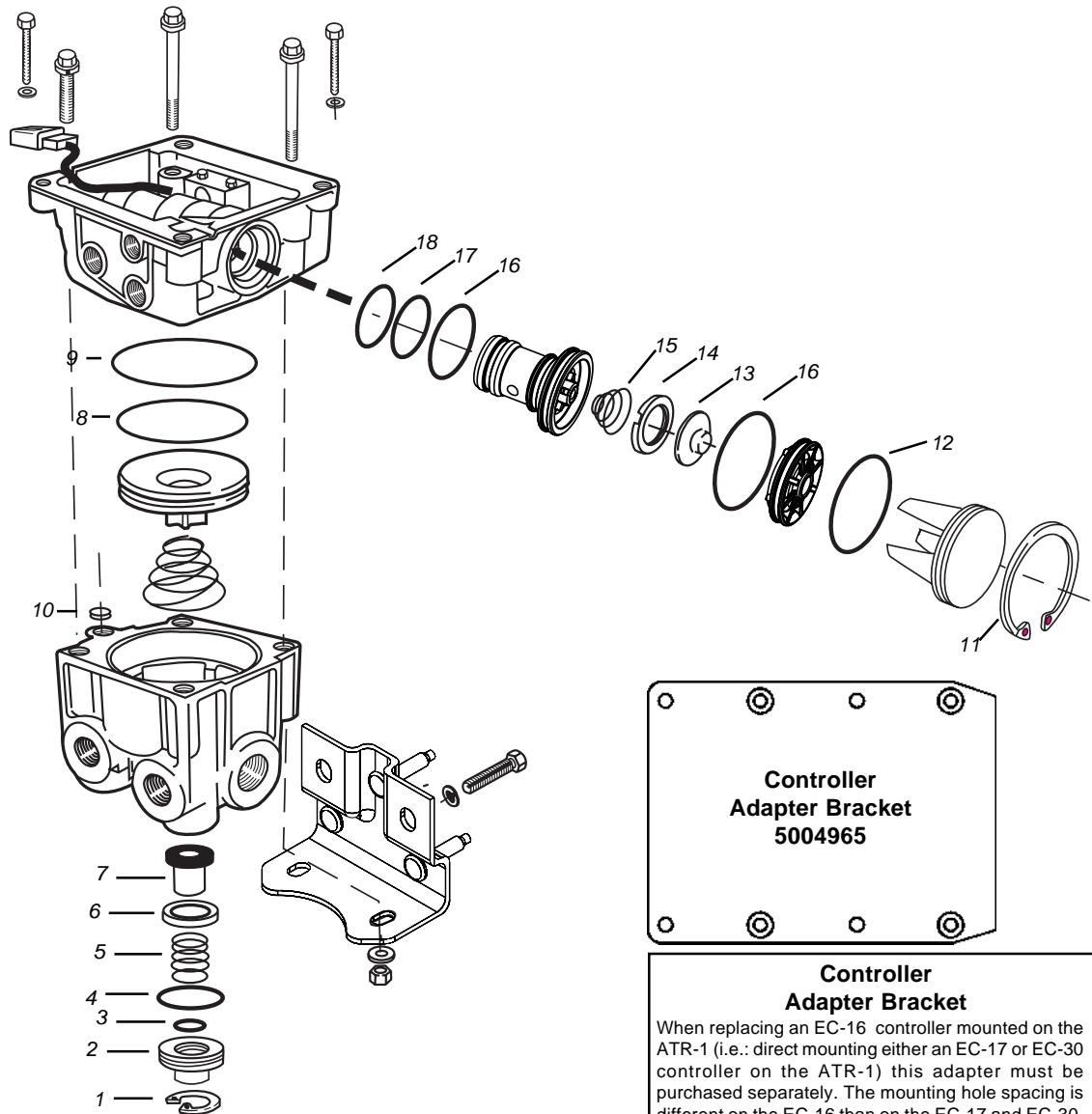
ATR-1 CHANGEOVER	
O.E. Pc. No.	Service Pc. No.
5007256	800709
5008259	800818
5008260	800817
5008261	800818
5008457	800842
5008967	800818
5009054	801118
5009324	801086
5009339	801118
5009773	801127
5009774	801127
5011362	801118



ATR-1 & ATR-1DC ANTILOCK TRACTION RELAY ASSEMBLIES										
Service Pc. No.	Port A	Port B	Del Horiz	Del Vert	Cover	Crack Press.	Solenoid Conn.	Mtg. Brkt. (1)	Maint. Kit	Comments
65516	---	---	1/2 PT	---	---	4	DT04-2P	5001657	109368	
800030	---	---	1/2 PT	---	112570	4	DT04-2P	5001657	109368	
800298	---	---	1/2 PT	---	5001947	4	DT04-2P	---	109368	
800335	---	---	1/2 PT	---	5001947	4	DT04-2P	---	109368	Plastic Screw w/Conn
800643	---	1/8 PT	1/2 PT	3/8 PT	112570	4	DT04-2P	5005776	109368	
800709	1/4 PT	---	1/2 PT	---	---	4	DT04-2P	5001657	109359	
800817	---	---	1/2 PT	---	---	4	DTM06-2S	5001657	109368	
800818	---	---	1/2 PT	---	112570	4	DTM06-2S	5001657	109368	
801086	1/4 PT	---	1/2 PTC	Note 2	112570	4	DTM06-2S	5009412	5004570	Sup. Prts: 2-1/2" PTC
801118	1/4 PT	---	1/2 PTC	Note 2	112570	4	DTM06-2S	---	5004570	Sup. Prts: 1-1/2" PTC 1-1/2" PT
801127	---	---	1/2 PT	3/8 PT	112570	4	DTM06-2S	5001657	109368	
800040	---	---	1/2 PT	---	112570	5.5	DT04-2P	5001657	109368	
800041	---	---	3/8 PT	3/8 PT	112570	5.5	DT04-2P	5005776	109368	
800096	---	---	1/2 PT	3/8 PT	112570	5.5	DT04-2P	5005776	109368	
800465	1/4 PT	---	3/8 PT	3/8 PT	112570	5.5	DT04-2P	5001657	109359	
800541	1/4 PT	1/8 PT	3/8 PT	3/8 PT	112570	5.5	DT04-2P	5001657	5004570	
800609	1/4 PT	1/8 PT	3/8 PT	3/8 PT	---	5.5	DT04-2P	5001657	5004570	
800642	---	1/8 PT	1/2 PT	3/8 PT	112570	5.5	DT04-2P	5005776	109368	
800692	1/4 PT	---	1/2 PT	3/8 PT	112570	5.5	DT04-2P	5005776	5004570	

Note 1: Mounting bracket 5001657 has three 5/16"-18 x 1.35" studs. Mounting bracket 5005776 has two 3/8"-16 and three 5/16"-18 threaded holes. Mounting bracket 5009412 has two M8x1.25-5H threaded holes and two .55" holes.

Note 2: One vertical delivery port is 3/8" pipe thread (PT) and one is 3/8" push-to-connect (PTC).



MAINTENANCE KIT 109368

Contains the following parts keyed to the illustration above.

KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	SEALING RING
11	1	RETAINING RING
12	1	O-RING
13	1	CHECK VALVE
14	1	O-RING
15	1	SPRING
16	2	O-RING
17	1	O-RING
17	1	O-RING

MAINTENANCE KIT 109359

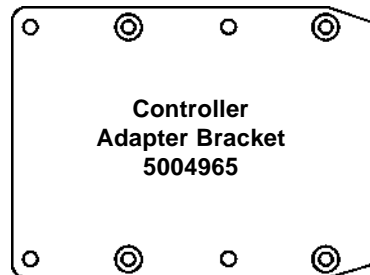
Contains the following parts keyed to the illustration above.

KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	SEALING RING
11	1	RETAINING RING
12	1	O-RING
13	1	CHECK VALVE
14	1	CHK VLV GUIDE
15	1	SPRING
16	2	O-RING
17	1	O-RING
18	1	O-RING

MAINTENANCE KIT 5004570

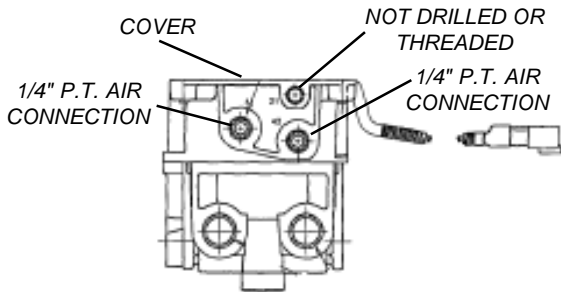
Contains the following parts keyed to the illustration above.

KEY NO.	QTY.	DESCRIPTION
11	1	RETAINING RING
12	1	O-RING
13	1	CHECK VALVE
14	1	CHK VLV GUIDE
15	1	SPRING
16	2	O-RING
17	1	O-RING
18	1	O-RING



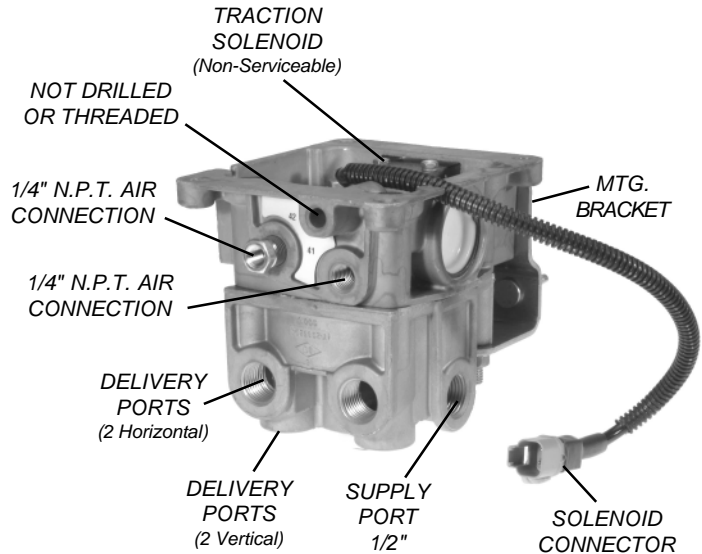
Controller Adapter Bracket
5004965

Controller Adapter Bracket
When replacing an EC-16 controller mounted on the ATR-1 (i.e.: direct mounting either an EC-17 or EC-30 controller on the ATR-1) this adapter must be purchased separately. The mounting hole spacing is different on the EC-16 than on the EC-17 and EC-30.



REMOTE MOUNT ATR-2

The remote mount version of the ATR-2 is designed to be mounted separate from the AntiLock/Traction controller and utilizes a cover. Service Replacement units without a cover are not intended for remote mounting.



ATR-2 CHANGEOVER	
O.E. Pc. No.	Service Pc. No.
109438	65539
109810	65663
550567	65509
550733	65539
550761	800296
550778	65663
5000076	800007
5000077	800007
5000322	65539
5000336	800031
5001965	65663
5002145	65663
5002146	65663
5002212	800031

ATR-2 CHANGEOVER	
O.E. Pc. No.	Service Pc. No.
5003412	800334
5004016	65663
5004860	800500
5005983	65663
5006149	800611
5006676	801101
5006677	801119
5006905	800007
5008973	800007
5009082	801119
5009337	801101
5009356	801119
5011361	801119

Solenoid Connector Styles



DEUTSCH DT04-2P CONNECTOR

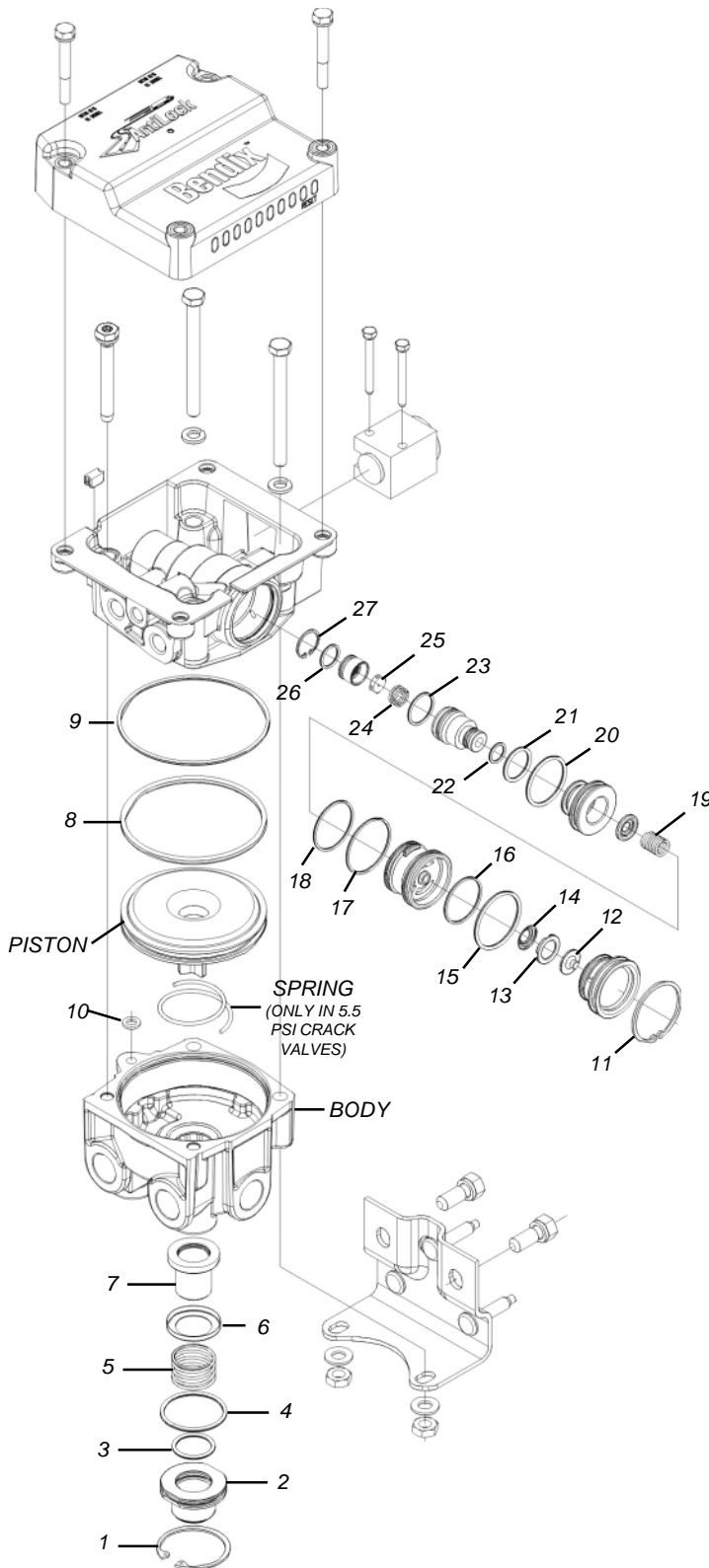


DEUTSCH DTM06-2S CONNECTOR

Service Pc. No.	Del Horiz	Del Vert	Crack Press. PSI	Cover Plate	Mtg. Brkt. (1)	Solenoid Conn.	Comments
65509	1/2 NPT	---	4	---	5001657	DT04-2P	
65539	1/2 NPT	---	5.5	112570	5001657	DT04-2P	
65663	3/8 NPT	3/8 NPT	5.5	112570	5005776	DT04-2P	
800007	1/2 NPT	3/8 NPT	5.5	112570	5005776	DT04-2P	
800031	1/2 NPT	---	4	112570	5001657	DT04-2P	
800296	1/2 NPT	---	4	5001947	---	DT04-2P	
800334	1/2 NPT	3/8 NPT	4	5001947	---	DT04-2P	Connector has plastic screw
800500	1/2 NPT	3/8 NPT	5.5	5001947	---	DT04-2P	Connector has plastic screw
801101	1/2 PTC	Note 2	4	112570	5009412	DTM06-2S	Sup. Prts.: 2-1/2" PTC
801119	1/2 PTC	Note 2	4	112570	---	DTM06-2S	Sup. Prts.: 1-1/2" PT 1-1/2" PTC

Note 1: Mounting bracket 5001657 has three 5/16"-18 x 1.35" studs. Mounting bracket 5005776 has two 3/8"-16 and three 5/16"-18 threaded holes. Mounting bracket 5009412 has two M8x1.25-5H threaded holes and two .55" holes.

Note 2: One vertical delivery port is 3/8" pipe thread (PT) and one is 3/8" push-to-connect (PTC).

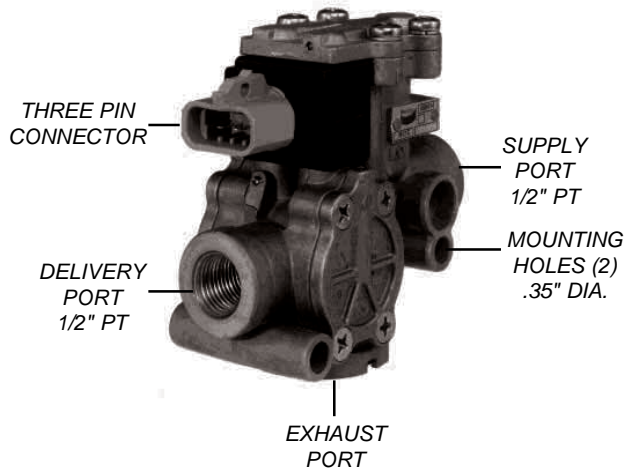


NOTE
DETAIL AND SUB-ASSEMBLY PARTS OTHER THAN THOSE SHOWN IN THE MAINTENANCE KIT ARE NOT AVAILABLE FOR SERVICE.

MAINTENANCE KIT 109359
CONTAINS THE FOLLOWING PARTS KEYED TO THE EXPLODED ILLUSTRATION:

KEY NO.	QTY.	DESCRIPTION
1	1	RETAINING RING
2	1	EXH COVER CPL
3	1	O-RING
4	1	O-RING
5	1	VALVE SPRING
6	1	VALVE RETAINER
7	1	INL & EXH VALVE
8	1	O-RING
9	1	O-RING
10	1	SEALING RING
11	1	RETAINING RING
12	1	CHECK VALVE
13	1	CHK VLV GUIDE
14	1	SPRING
15	1	O-RING
16	1	O-RING
17	1	O-RING
18	1	O-RING
19	1	SPRING
20	1	O-RING
21	1	O-RING
22	1	O-RING
23	1	O-RING
24	1	SPRING
25	1	VALVE
26	1	O-RING
27	1	RETAINING RING

M-21 CHANGEOVER	
Pc. No.	Service Pc. No.
65337	65337
65412	65337
108575	65337
550414	65337
550436	65337
550443	65337
550530	65337
5002620	65337
5006703	65337



Interchange Note

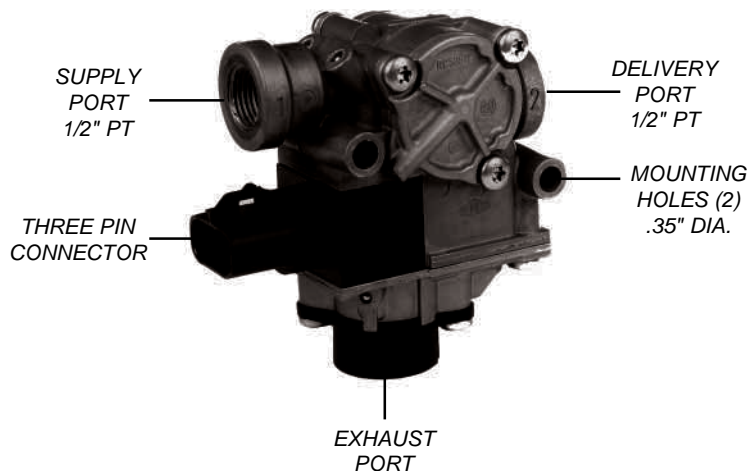
An M-21 can be replaced with an M-30 however note that the air lines (supply & delivery) do not enter the valves in the same position relative to the electrical connector. If two modulators are used on an axle or tandem, both should be changed to the same model.

The exhaust port of the M-21 and M-30 must point toward the road surface.

**SERVICE
PART NUMBER
065337**

M-22 Modulator

**M-22 Obsolete
Superseded By
M-30 Modulator**



M-22 TO M-30 CHANGEOVER

M-22 Pc. No.	M-30 Pc. No.
800014	800665
800357	800665
800451	800666
5000007	800665
5001108	800665
5001252	800968
5001764	800665
5001810	800665

M-22 TO M-30 CHANGEOVER

M-22 Pc. No.	M-30 Pc. No.
5001934	800665
5002108	800665
5002109	800665
5002744	800665
5003213	800665
5003737	800665
5004820	800666

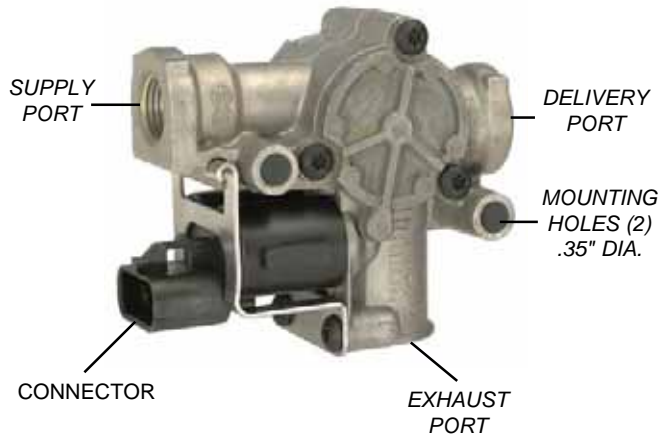
Interchange Note

Both modulators on a single axle must be of the same type or model. When replacing a M-22 with an M-30 modulator, both M-22 modulators on the axle must be replaced at the same time so that the same modulator model is installed on each end of the axle. The M-22 and M-30 may be mixed on the same vehicle but not on the same axle.

M-30 Modulator

Antilock

CATALOG
13-PWR-15



M-30 ANTILOCK MODULATOR

M-30 MODULATOR SERVICE PART NUMBERS				
Pc. No.	Supply Port	Delivery Port	Conn. Color ¹	Comments
800665	1/2" NPT	1/2" NPT	Black	
800968	1/2" NPT	1/2" NPT	Black	Silenced
801077	1/2" NPT	1/2" NPT	White	
801323	1/2" NPT	1/2" NPT	-----	Euro
801078	1/2" NPT	1/2" PTC	Black	
801079	1/2" NPT	1/2" PTC	White	
801080	1/2" NPT	1/2" STC	Black	
801081	1/2" NPT	1/2" STC	White	
800666	1/2" PTC	1/2" PTC	Black	
800794	5/8" PTC	1/2" NPT	Black	
800795	5/8" PTC	1/2" NPT	White	
801082	5/8" PTC	1/2" STC	Black	
801083	5/8" PTC	1/2" STC	White	

¹ The Black or White color of the M-30 electrical connector has no effect on operation and is used by some vehicle manufacturers to mate with like colored wiring connectors on the vehicle wiring harness.



STC
Air Connection
(Snap-To-Connect)



PTC
Air Connection
(Push-To-Connect)



NPT
Air Connection
(Pipe Thread)

M-30 MODULATOR PART NUMBER CHANGEOVER

M-30 CHANGEOVER	
Pc. No.	Service Pc. No.
5005312	800665
5005894	800665
5005895	800666
5005915	801078
5005918	801081
5006432	800666
5006625	800665
5006626	800666
5006658	800665
5006659	800665
5006678	800665
5006679	801077
5006680	800670
5006681	800671
5006682	800670
5006683	800671
5006874	800665
5006875	800665
5006876	800665

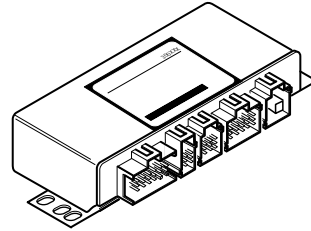
M-30 CHANGEOVER	
Pc. No.	Service Pc. No.
5007135	800665
5007891	800794
5007892	800795
5007893	800796
5007894	800797
5007895	800798
5007896	800799
5007897	800794
5007898	800795
5007899	800796
5007900	800797
5007901	800798
5007902	800799
5008128	800665
5008129	800665
5008487	800796
5008488	800797
5008539	800858
5008540	800859

M-30 CHANGEOVER	
Pc. No.	Service Pc. No.
5008541	800858
5008542	800859
5008545	800858
5008546	800859
5008926	800968
5008927	800968
5008951	800968
5008981	800665
5008982	800665
5009085	801083
5009086	801082
5009304	801077
5009305	801078
5009306	801079
5009308	801080
5009309	801081
5011025	801323
5011026	801323
5011027	801323

Truck, Bus, Coach

**Basic Generation 5 Control Unit
 With Power Line Carrier (PLC)**

4-Channel ABS only, No Engine Data Link, Retarder Control
 via Relay 300342

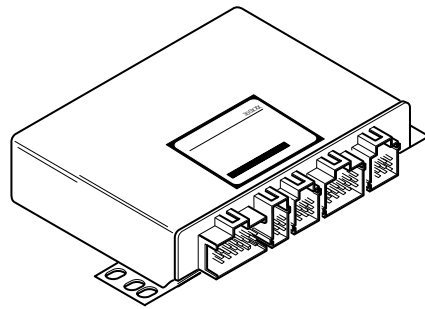


Basic Generation 4 Control Unit

4-Channel ABS Only, No Engine Data Link, Basic Flanges,
 Retarder Control via Relay 300222

**Standard Generation 5 Control Unit
 With Power Line Carrier (PLC)**

6-Channel ABS/ATC, J1939 300344
 6-S/6-M, ATC, Retarder Control via Data Link, J1939
 (Special Order) 300366
 4-S/4M, ATC, Retarder Control via Data Link, J1939
 (Special Order)..... 300365

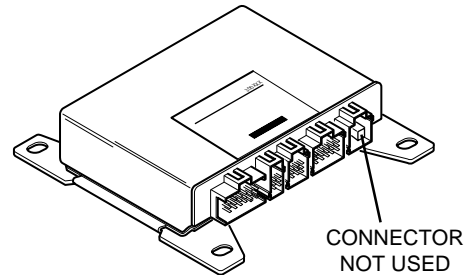


Standard Generation 4 Control Unit

4-Channel ABS/ATC, J1922 300223
 4-Channel ABS/ATC, J1939 300410

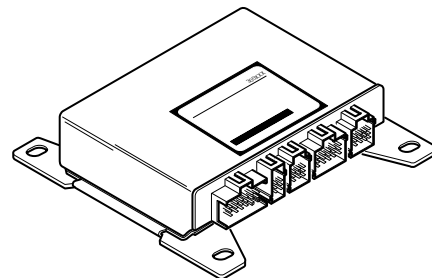
Changeover:

Previous model 300325 is replaced by 300410
 Previous model 300143 is replaced by 300410
 Previous model 300209 is replaced by 300223



Standard Generation 4 Control Unit

6-Channel ABS/ATC, J1922 300126



Limited Stock of Earlier Models may be Available

300069 (Call for availability)
 300125 (Once limited stock on hand is depleted, replacement part is 300223)
 300144 (Once limited stock on hand is depleted, replacement part is 300344)
 300239 (Once limited stock on hand is depleted, replacement part is 300223)

Truck, Bus, Coach

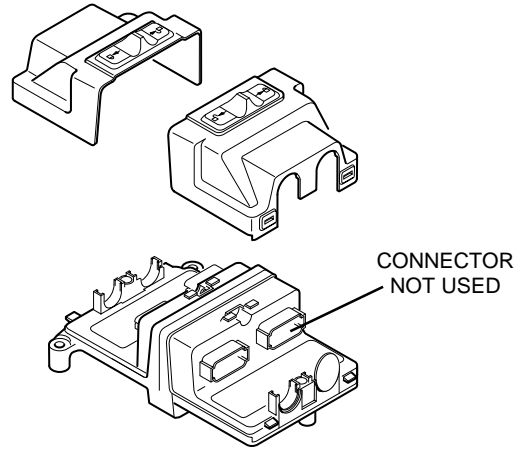
**Basic Generation 5 Control Unit
With Power Line Carrier (PLC)**

4-Channel ABS only, No Engine Data Link 300343

Basic Generation 4 Control Unit

4-Channel ABS/ATC, J1922 300199

4-Channel ABS/ATC, J1939 300208



**Standard Generation 5 Control Unit
With Power Line Carrier (PLC)**

6-Channel ABS/ATC, J1939 300345

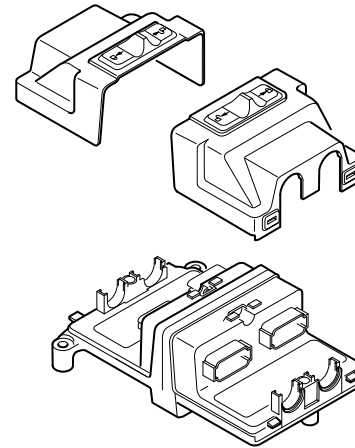
6-S/6-M, ATC, Retarder Control via Data Link, J1939
(Special Order) 300368

4-S/4M, ATC, Retarder Control via Data Link, J1939
(Special Order) 300367

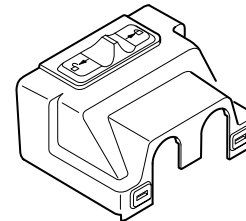
Standard Generation 4 Control Unit

6-Channel ABS/ATC, J1939 300149

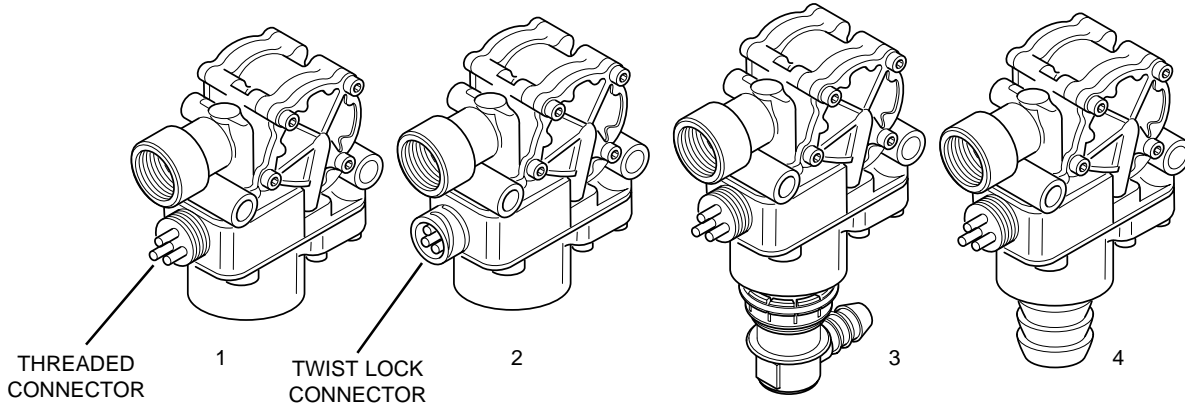
6-Channel ABS/ATC, J1939, 24 volt (Military) . . 300130



Replacement Cover. 300271



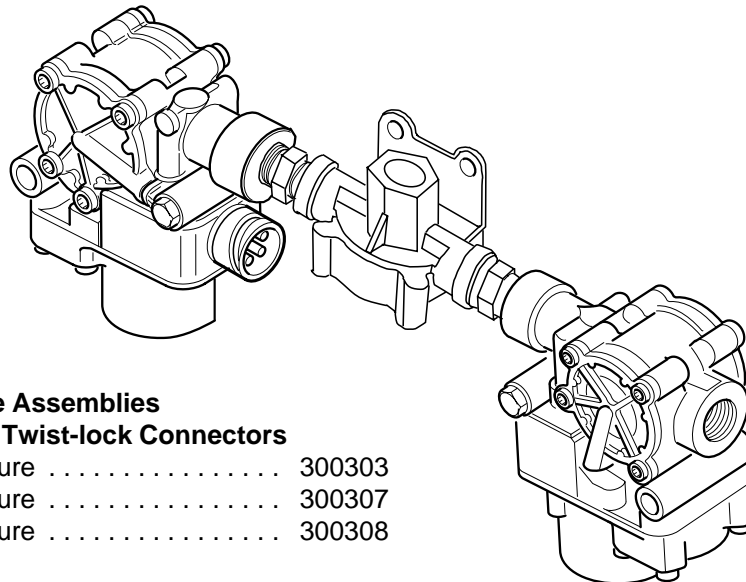
Truck/Tractor



Pressure Modulator Valves

- | | | |
|---|--------|---------------------------------------|
| (1) 12 volt, Threaded, Metric-Threaded Ports | 300073 | } Two equivalent models are available |
| (1) 12 volt, Threaded, Metric-Threaded Ports | 300386 | |
| (2) 12 volt, Twist-lock, NPT-Threaded Ports | 300280 | } Two equivalent models are available |
| (2) 12 volt, Twist-lock, NPT-Threaded Ports | 300387 | |
| (3) 24 volt, Military, with 90° Snorkel | 300127 | |
| (4) 24 volt, Military, with High Flow Snorkel | 300248 | |

Truck/Tractor Steer Axle ABS Valve Assemblies with Twist-Lock Connectors



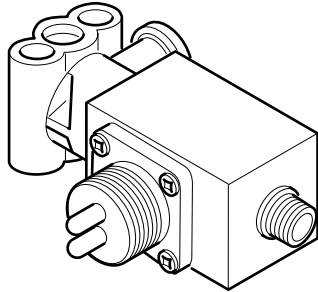
ABS Front Axle Valve Assemblies

All with 1/2 NPT, and Twist-lock Connectors

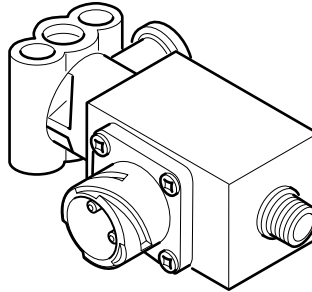
- | | |
|-----------------------------------|--------|
| 0-1 PSIG Crack Pressure | 300303 |
| 3-4 PSIG Crack Pressure | 300307 |
| 6-8 PSIG Crack Pressure | 300308 |

Changeover:

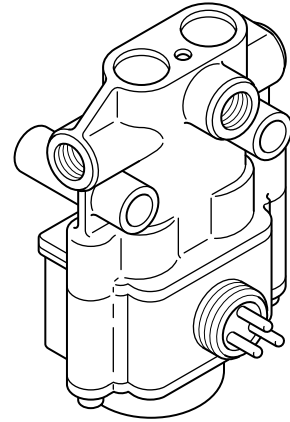
- Previous model 300299 is replaced by 300303
- Previous model 300300 is replaced by 300307
- Previous model 300301 is replaced by 300308



1



2

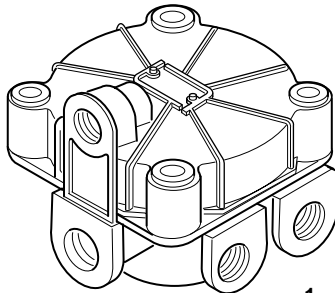


3

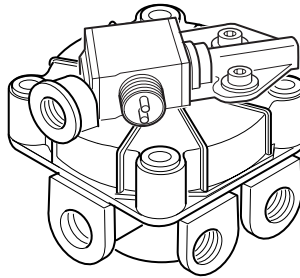
Traction Control Valves

- (1) 12 volt, Single Channel, Threaded Connectors 300132
- (1) 24 volt, Military, Single Channel, Threaded Connectors 300128
- (2) 12 volt, Single Channel, Twist-lock Connectors 300354
- (3) Dual Channel, Threaded Connectors 300074

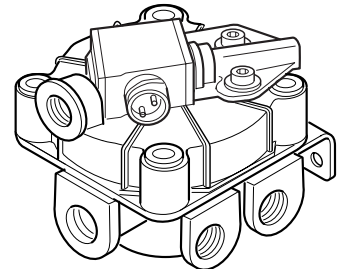
Truck/Tractor Relay Valves



1



2

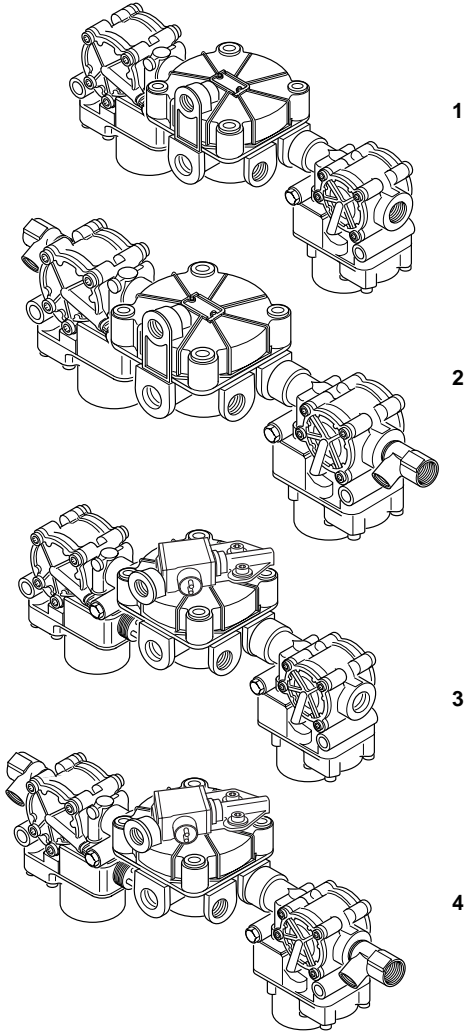


3

Four Port Tractor Relay Valves

- (1) 4.0 PSIG Crack Pressure 300204
- (1) 5.5 PSIG Crack Pressure 300205
- (2) 4.0 PSIG Crack Pressure, ATC with
Threaded Connectors 300206
- (2) 5.5 PSIG Crack Pressure, ATC with
Threaded Connectors 300207
- (3) 5.5 PSIG Crack Pressure, ATC with
Twist-Lock Connectors 300317

**Rear Axle Valve Assemblies
 with Threaded Connectors**



Rear Axle Valve Assemblies with Threaded Connectors

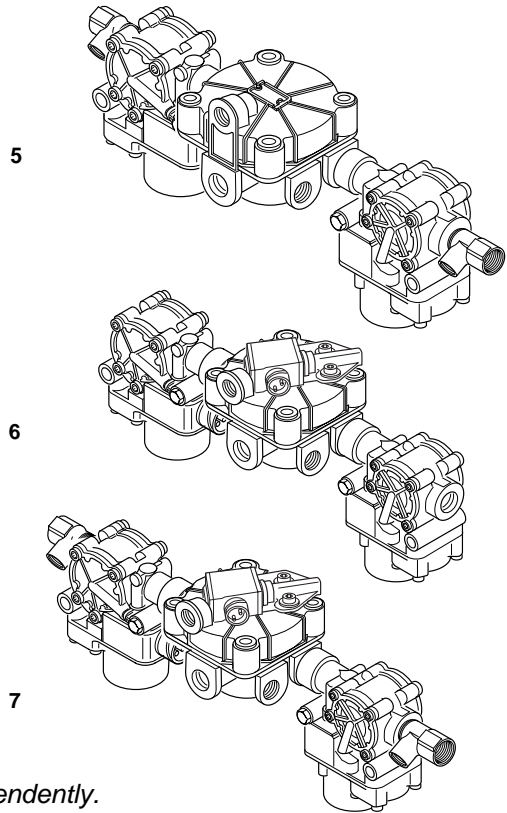
- (1) 4.0 PSIG Crack Pressure
 (fittings provided by OEM) 300202
- (1) 5.5 PSIG Crack Pressure
 (fittings provided by OEM) 300203
- (2) 4.0 PSIG Crack Pressure
 (two tee fittings) 300200
- (2) 5.5 PSIG Crack Pressure
 (two tee fittings) 300201
- (3) 4.0 PSIG Crack Pressure, ATC,
 (fittings provided by OEM) 300148
- (4) 5.5 PSIG Crack Pressure, ATC,
 (two tee fittings) 300153

Changeover:
 Previous model 300134 is replaced by 300202

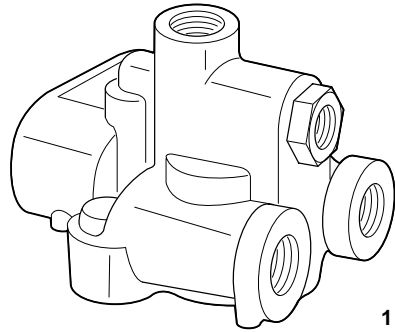
**Rear Axle Valve Assemblies
 with Twist-Lock Connectors**

**Four Port Rear Axle Valve Assemblies with
 Twist-Lock Connectors**

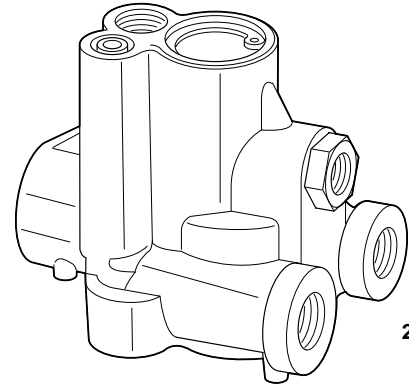
- (5) 5.5 PSIG Crack Pressure
 (two tee fittings) 300311
- (6) 5.5 PSIG Crack Pressure, ATC,
 (fittings provided by OEM) 300313
- (7) 5.5 PSIG Crack Pressure, ATC,
 (two tee fittings) 300315



Note: Relay valve or modulator valves may be serviced independently.



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Spring Brake Control Valves

- (1) TEV (Spring Brake Priority) 300251
- (2) STEV (Service Brake Priority) 300252

SENSOR CONNECTION

HARNESS CONNECTION



Wheel End Speed Sensor Extension Harnesses

3.3 ft. (1.0 m.)	300257
6.6 ft. (2.0 m.)	300258
9.8 ft. (3.0 m.)	300259
13.2 ft. (4.0 m.)	300260

SENSOR CONNECTION

ECU CONNECTION



Wheel End Speed Sensor Extension Harnesses with One End Unterminated

6.6 ft. (2.0 m.)	300090
9.8 ft. (3.0 m.)	300091
16.4 ft. (5.0 m.)	300092
26.3 ft. (8.0 m.)	300093
32.8 ft. (10.0 m.)	300094
39.4 ft. (12.0 m.)	300095

VALVE CONNECTION

ECU CONNECTION



Threaded Modulator Valve Extension Harnesses with One End Unterminated

3.3 ft. (1.0 m.)	300113
9.8 ft. (3.0 m.)	300096
13.1 ft. (4.0 m.)	300097
19.7 ft. (6.0 m.)	300098
25.1 ft. (7.6 m.)	300384
29.5 ft. (9.0 m.)	300099
39.4 ft. (12.0 m.)	300100
49.2 ft. (15.0 m.)	300101

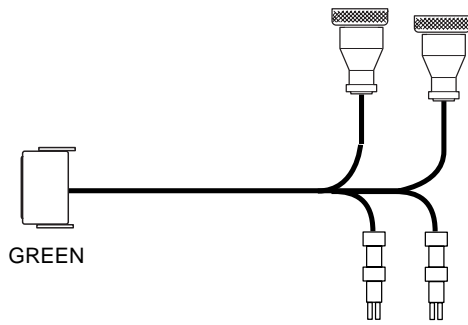
VALVE CONNECTION

ECU CONNECTION



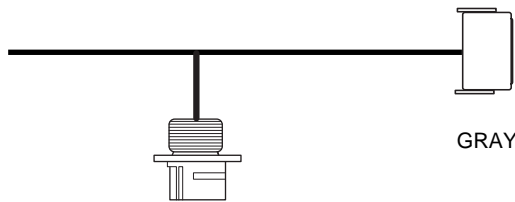
Bayonet Modulator Valve Extension Harnesses with One End Unterminated

25.1 ft. (7.6 m.)	300385
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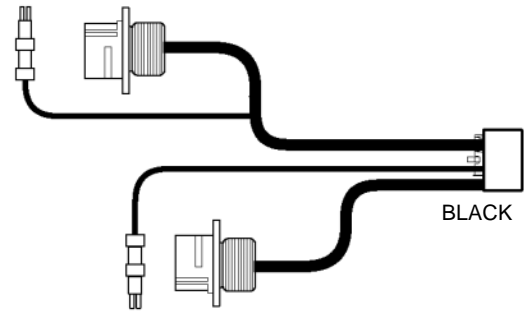
Motor Coach Harnesses Gen 4 or 5

- 2S-2M, Rear, Four Channel Threaded Connector
 Connectors 12 ft. (3.6 m.) and 10 ft. (3.0 m.),
 Sensors 12 ft. (5.6 m.) 300241
 Connectors 22 ft. (6.7 m.) and 20 ft. (6.1 m.),
 Sensors 22 ft. (6.7 m.) 300320



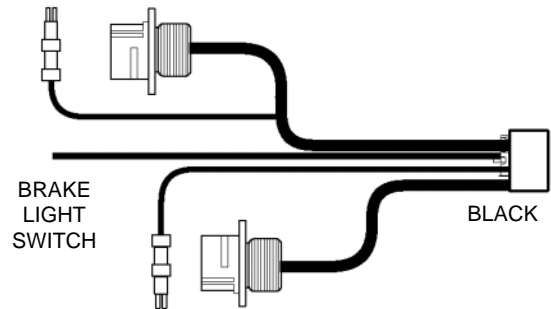
Motor Coach Power and Diagnostic Harnesses Gen 4 or 5

- ECU to breakout 28.0 ft (8.5 m.),
 Breakout to SAE J1587 3.0 ft. (0.9 m.),
 Breakout to electric panel 6.0 ft. (1.8 m.) 300242
 ECU to breakout 24.0 ft (7.3 m.),
 Breakout to SAE J1587 3.0 ft. (0.9 m.),
 Breakout to electric panel 6.0 ft. (1.8 m.) 300321



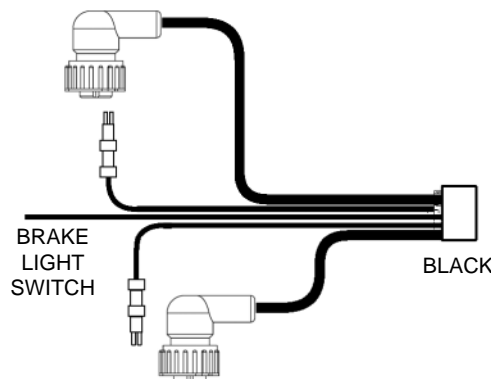
Motor Coach Front Chassis Harnesses

- Four Channel, Threaded Connector
 Connectors 20 ft. (6.1 m.) and 22 ft. (6.7 m.),
 Sensors 23 ft. (7 m.) 300240
 Connectors 18 ft. (5.5 m.) and 16 ft. (4.9 m.),
 Sensors 19 ft. (5.8 m.) 300319



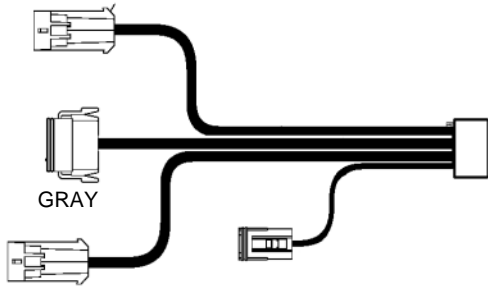
Motor Coach Front Chassis Harnesses

- Four Channel, Threaded Connector
 Connectors 16 ft. (4.9 m.) and 18 ft. (5.5 m.),
 Sensors 19 ft. (5.8 m.),
 Brake Light Switch Cable 25 ft. (7.6 m.) 300388



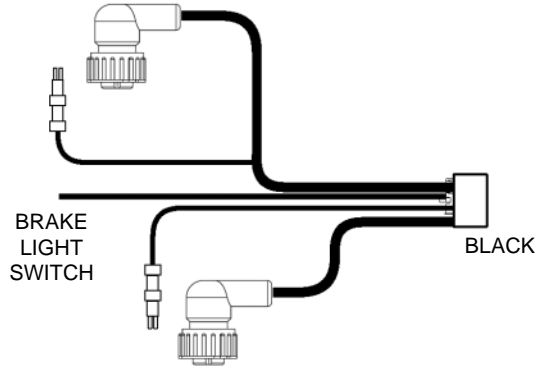
Motor Coach Front Chassis Harnesses

- Four Channel, with Bayonet Connector
 Connectors 18.7 ft. (5.7 m.),
 Sensors 20.7 ft. (6.3 m.) and 19.7 ft. (6.0 m.),
 Brake Light Switch Cable 31 ft. (9.4 m.) 300396



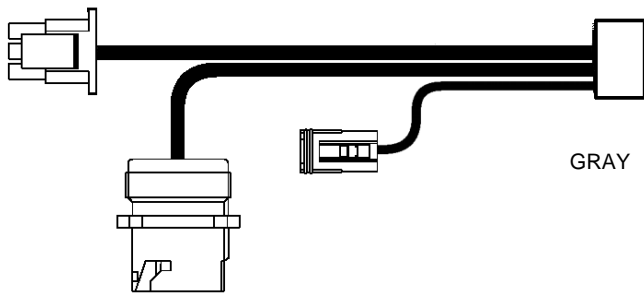
Power Harness

2.6 ft (0.8 m.), Packard Connectors 2.6 ft. (0.8 m.),
Deutch J1939 Connector 1.0 ft. (0.3 m.). 300182



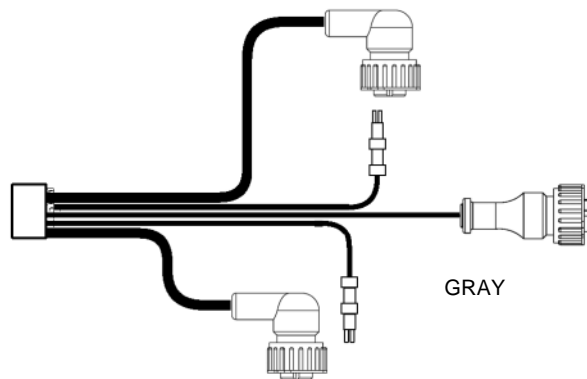
Motor Coach Front Chassis Harnesses

Four Channel, with Bayonet Connector
Connectors 16 ft. (4.9 m.) and 18 ft. (5.5 m.),
Sensors 20.7 ft. (6.3 m.) and 19.7 ft. (6.0 m.),
Brake Light Switch Cable 31 ft. (9.4 m.) 300394



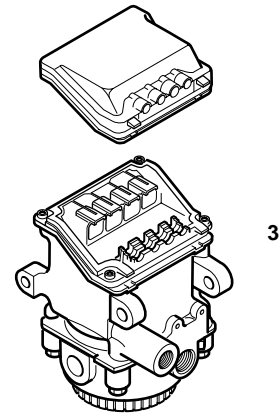
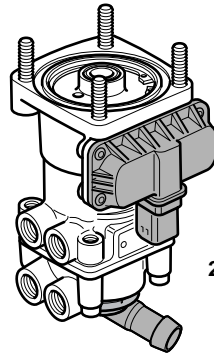
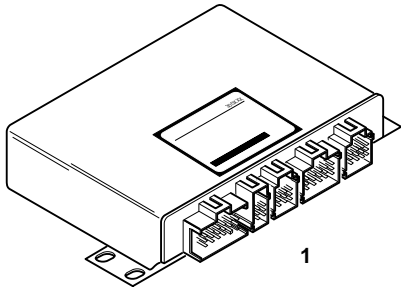
Power Harness

34.5 ft (10.5 m.), Deutch Connector 31 ft. (9.4 m.),
Deutch J1939 Connector 3.0 ft. (0.9 m.). 300390



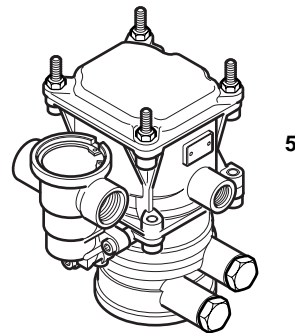
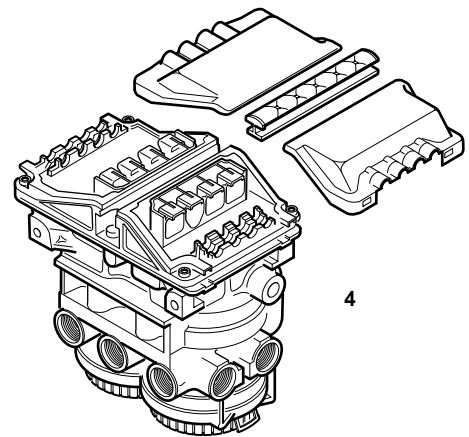
Rear Power Harness, 4 Channel, with ATC

Modulator Connectors 20 ft. (6.1 m.) and 22 ft. (6.7 m.),
ATC Connector 16 ft. (4.9 m.),
Sensors 22 ft. (6.7 m.) 300395
Modulator Connectors 9 ft. (2.7 m.), ATC Connector 9 ft.
(2.7 m.), Sensors 9 ft. (2.7 m.) 300397



Electronically Controlled Brake System Components

(1) ECU, 12 volt	300158
(1) ECU, EBS 2.2 J1939 12 volt (Volvo)	300326
 (2) Treadle Valve	 300159
 (3) Pressure Control Module, 1 Channel, 12 volt, Metric Threads	 300160
 (4) Pressure Control Module, 2 Channels, 12 volt, Metric Threads	 300161
 (5) Trailer Control Module, 12 volt, Metric Threads	 300302
 (6) Axle load Sensor (Air Bag Pressure Sensor)	 300162
 (7) Sensor Extension Cable, 1.5 ft. (0.45 m.) . .	 300322
(7) Sensor Extension Cable, 1.5 ft. (0.45 m.) . .	300323



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