Hydraulic Power Brake (HPB) System Parts Information

Support Literature

PB06107 Hydraulic Power Brake (HPB) Parts Book MM0401

WABCO Hydraulic Power Brake (HPB) System

S446 046 921 2

PART NUMBER

S446 046 921 2

S400 851 881 0

S400 851 882 0

S458 501 924 2

S458 501 924 2

S458 501 923 2

R950054

PART NUMBER

S478 407 921 2

S478 901 052 2

S478 901 053 2

MASTER CYLINDER/

COMPONENTS

Level Switch

Reservoir with Fluid

Master Cylinder Kit

Reservoir Cap Kit

Travel Switch Kit*

Fluid Level Switch

Rubber Grommet Kit

Roll Pin Kit

Clevis Pin Kit

PART NUMBER

S468 413 921 2

S451 900 925 2

S400 850 844 0

S451 900 924 2

Straight

Sensors

R950057

RESERVOIR ASSEMBLY

Master Cylinder/Reservoir

Reservoir Kit — No Cap

Master Cylinder Bracket

Assembly with Travel Switch S468 411 005 0

*Refer to PIL521 for additional service information.

Master Cylinder Components

R950054

HCU Hardware

Accumulator

Electronic Control Unit (ECU)

APPLICATION INFORMATION

sensor seals and 4 screws.

PART NUMBER APPLICATION INFORMATION

10 coil application.

S478 407 921 2

APPLICATION INFORMATION

For 8 coil and 10 coil application.

For 8 coil and 10 coil application.

S468 413 020 2

R950055

R950056

S400 850 915 0

S478 901 054 0

S400 850 844 0

S468 413 921 2

R950057

S451 900 924 2

S451 900 925 2

APPLICATION INFORMATION

Kit contains fluid level switch.

vehicles built after 2006.

Kit contains two roll pins.

Kit contains one master cylinder clevis pin.

Kit contains travel switch, O-ring and 2 screws. For

HPB Master Cylinder Quick Reference

application.

Kit includes four bushings and four 10 mm screws.

For use with front (S478 901 052 2) and rear (S478 901 053 3) mounting brackets. For 8 coil and 10 coil

Kit contains two relay valve bleeder screws and two

included. Order Kit R950054 for mounting hardware.

included. Order Kit R950054 for mounting hardware.

BUS APPLICATIONS TRUCK APPLICATIONS

S468 411 005 0

S468 413 021 2

R955421

R950056

S400 850 915 0

S478 901 057 2

S400 850 844 0

S468 413 921 2

R950057

S451 900 924 2

S451 900 925 2

protective caps. For 8 coil and 10 coil application.

Front mounting bracket. Mounting hardware not

Rear mounting bracket. Mounting hardware not

application.

ECU hardware kit. Contains two pressure seals and four screws. For 8 coil and 10 coil applications.

ECU replacement kit, ABS with ATC, 10 coils ECU, 12V. Kit contains ECU, 2 pressure sensor seals and

ECU replacement kit, ABS only, without ATC, 8 coils

S458 501 923 2

S478 901 052 2 **Front Bracket**

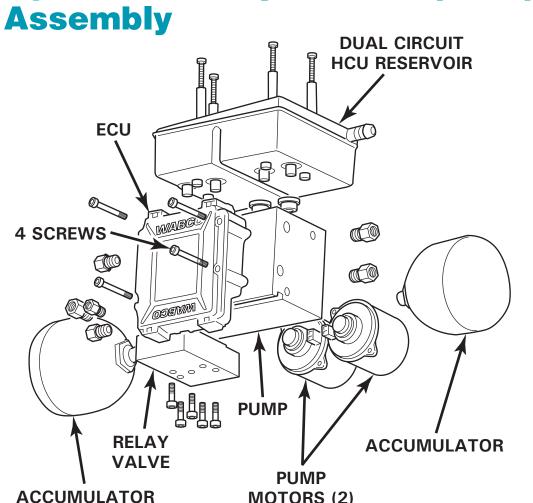
S478 901 053 2

Rear Bracket

ECU, 12V; RWD. Kit contains ECU, 2 pressure

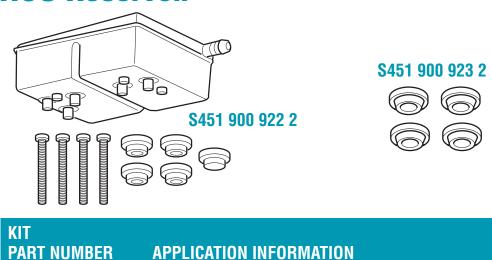
Kit contains two 0-rings. For 8 coil and 10 coil

Hydraulic Compact Unit (HCU)



ACCUMULATOR	MOTORS (2)
HCU REPLACEMENT KIT PART NUMBER	APPLICATION INFORMATION
S400 850 875 0	HCU replacement kit (wet), 12V, 10 valves unit, w/ECU (10 coil), RWD, w/ATC, w/Power Brake plug, w/o brackets, w/reservoir (detached).
S400 850 876 0	HCU replacement kit (wet), 12V, 8 valves unit, w/ECU (8 coil), w/o ATC, w/o brackets, w/reservoir (detached).
S400 850 877 0	HCU replacement kit (wet), 12V, 10 valves unit, w/ECU (10 coil), RWD, w/ATC, w/Parking Brake, w/o brackets, w/reservoir (detached).
S400 850 878 0	HCU replacement kit (wet), 10 valves unit, w/o ECU (10 coil), RWD, w/ATC, w/PB plug, w/o brackets, w/reservoir (detached).
S400 850 879 0	HCU replacement kit (wet), 12V, 8 valves unit, w/o ECU (8 coil), w/o ATC, w/o brackets; w/reservoir (detached).
S400 850 880 0	HCU replacement kit (wet), 10 valves unit, w/o ECU (10 coil), RWD, w/ATC, w/Parking Brake, w/o brackets, w/reservoir (detached).

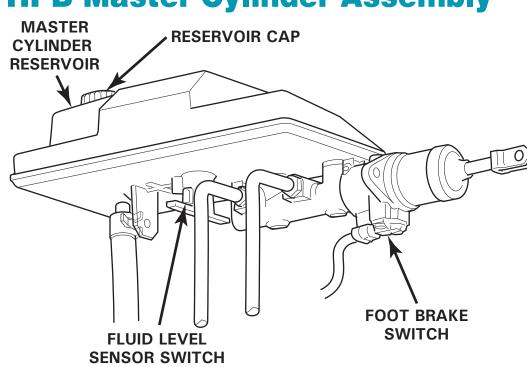
HCU Reservoir

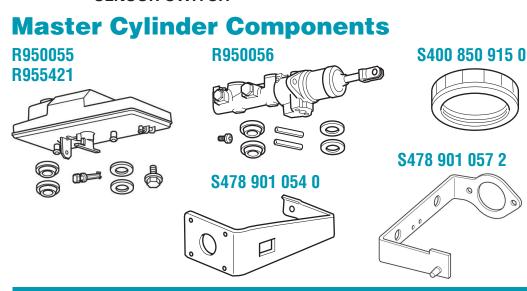


S451 900 922 2 Kit contains HCU reservoir, four screws, reservoir plug and four rubber grommets. For 8 coil and 10 coil application.

Kit contains four rubber grommets. For 8 coil and S451 900 923 2 10 coil application.

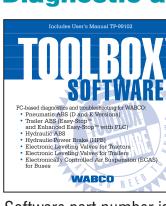
HPB Master Cylinder Assembly





	PART NUMBER	APPLICATION INFORMATION
	R950055	Kit contains master cylinder reservoir, fluid level switch, 2 rubber grommets and washers. Cap not included. For bus applications only.
	R955421	Kit contains master cylinder reservoir, travel switch and screw, 2 rubber grommets and washers. Cap not included. For medium-duty truck applications only.
	R950056	Kit contains master cylinder, screws, 2 rubber grommets and washers, 2 roll pins.
	S400 850 915 0	Master cylinder cap. Fits all master cylinder reservoirs. For bus and medium-duty truck application.
	S478 901 054 0	Use with master cylinder 468 411 005 0 and reservoir 468 413 020 2. For bus applications.
	S478 901 057 2	Use with master cylinder 468 411 005 0 and reservoir 468 413 021 2. For medium-duty truck applications.

Diagnostic and Test Equipment



TOOLBOX[™] Software is a PC-based diagnostics program for use with WABCO HPB. With this program the technician can display system faults and wheel speed data, test individual components, perform brake bleed procedures, verify wiring installation and more.

TOOLBOX version 9.0 or higher is recommended for HPB diagnostics. If running Vista, version 9.0

or higher is needed. Software part number is TOOLBOX. Contact SPX at 1-800-328-6657 to order.

U.S. / Canada: 855-228-3203 Mexico: 800-953-0248 www.zf.com/cv

S400 851 881 0

\$400 851 882 0

For Service/Aftermarket Orders:

US/Canada 855-228-3203 **Mexico** 800-953-0248

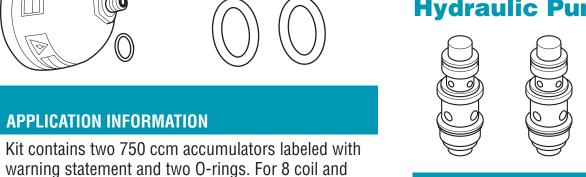
wabconaorders@zf.com **Email**

Product Catalog www.wabco-customercenter.com

HPB Hydraulic Compact Unit (HCU) (VEHICLE APPLICATIONS			
HYDRAULIC COMPACT UNIT (HCU) SERVICE KITS	10 0	OIL	8 COIL	
	W/ABS, W/ATC, W/PB	W/ABS, W/ATC	W/ABS ONLY	
HCU w/ ECU Kit	S400 851 877 0	S400 851 875 0	S400 851 876 0	
HCU w/o ECU Kit	S400 851 880 0	S400 851 878 0	S400 851 879 0	
ECU Kit Release 2	S400 851 881 0	S400 851 881 0	S400 851 882 0	
ECU Kit Release 1 (for WCC only)	S446 046 920 2	n/a	S446 046 922 2 (FWD)	
ECU Hardware Kit	S446 046 921 2	S446 046 921 2	S446 046 921 2	
HCU Reservoir Kit	S451 900 922 2	S451 900 922 2	S451 900 922 2	
Reservoir Rubber Grommet Kit	S451 900 923 2	S451 900 923 2	S451 900 923 2	
Accumulator Kit	S458 501 924 2	S458 501 924 2	S458 501 924 2	
Accumulator O-Ring Kit	S458 501 923 2	S458 501 923 2	S458 501 923 2	
Pressure Supply Valve Kit	S476 901 920 2	n/a	n/a	
Pressure Supply Valve Coil Kit	S442 879 920 2	n/a	n/a	
Parking Brake Switch Kit — 2nd gen.	S446 280 001 0	n/a	n/a	
Parking Brake Switch Kit with Short Bracket — 2nd gen.	S446 280 012 0	n/a	n/a	
Parking Brake Switch with Long Bracket — 2nd gen.	S446 280 022 0	n/a	n/a	
Parking Brake Switch Kit — 3rd gen.	S446 280 002 0	n/a	n/a	
Parking Brake Switch Kit with Short Bracket — 3rd gen.	S446 280 013 0	n/a	n/a	
Parking Brake Switch with Long Bracket — 3rd gen.	S446 280 023 0	n/a	n/a	
Parking Brake Knob	S446 280 790 4	S446 280 790 4	S446 280 790 4	
Relay Valve Kit — w/ ATC	S478 407 929 2	S478 407 929 2		
Relay Valve Kit — w/o ATC	n/a	n/a	S478 407 937 2	
Pump Replacement Kit	S478 408 926 2	S478 408 926 2	S478 408 926 2	
Relay Valve Bleeder Screw Kit	S478 407 921 2	S478 407 921 2	S478 407 921 2	
HCU Hardware Mounting Kit	R950054	R950054	R950054	
HCU Mounting Bracket — Front	S478 901 052 2	S478 901 052 2	S478 901 052 2	
	0.470.004.050.0	0.470.004.050.0	0.470.004.050.0	

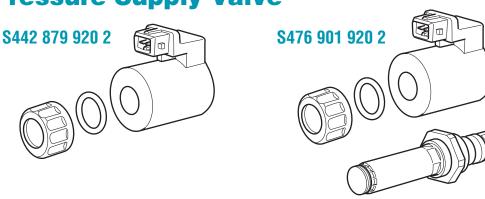
Hydraulic Pump

HCU Mounting Bracket — Rear



KIT Part Number	APPLICATION INFORMATION
S478 408 926 2	Kit contains two pumps and seal plate. For 8 coil and 10 coil application.

Pressure Supply Valve



KIT Part Number	APPLICATION INFORMATION
S442 879 920 2	Kit contains coil, nut and O-ring. For 8 coil and 10 coil application.
S476 901 920 2	Kit includes solenoid valve with coil, 0-ring and nut.

PART NUMBER	I.D.	0.D.	NO. OF TEETH	DIA.	APPLICATION INFORMATION
3237-L-1260	5.01"	6.78"	100		Before replacing a
3237-D-1070	5.11"	6.45"	100		tooth wheel, contact
3237-Q-1031	5.12"	7.50"	100		either the OEM or the
3237-R-1032	5.43"	7.68"	100		hub manufacturer to
3237-G-1047	5.99"	7.28"	100	6.31"	see if the wheel and
3237-Y-1195	6.30"	7.26"	100		hub are sold as one
3237-K-1051	6.43"	7.06"	100		unit. Part numbers
3237-V-1192	6.44"	7.56"	100		listed are for tooth
09-001867	6.49"	7.05"	100		wheels manufactured
3237-T-1242	6.50"	8.37"	80		by WABCO.
3237-H-1256	6.51"	7.30"	100		•
3237-V-1062	6.87"	7.91"	100		
3237-P-1056	7.79"	8.62"	100		

Information Cross Reference

Tooth Wheels							application.
PART NUMBER		0.D.	NO. OF TEETH	INSERT DIA.	APPLICATION INFORMATION	S446 280 012 0	Kit contains second generation switch and short bracket. S446 280 790 4 (Dash Knob) not included. For 8 coil and 10 coil application.
3237-L-1260 3237-D-1070 3237-Q-1031	5.01" 5.11" 5.12"	6.78" 6.45" 7.50"	100 100 100		Before replacing a tooth wheel, contact either the OEM or the	S446 280 013 0	Kit contains third generation switch and short bracket. S446 280 790 4 (Dash Knob) not included. For 8 coil and 10 coil application.
3237-R-1032 3237-G-1047 3237-Y-1195 3237-K-1051	5.43" 5.99" 6.30" 6.43"	7.68" 7.28" 7.26" 7.06"	100 100 100 100	6.31"	hub manufacturer to see if the wheel and hub are sold as one unit. Part numbers listed are for tooth wheels manufactured by WABCO.	S446 280 022 0	Kit contains second generation switch and long bracket. S446 280 790 4 (Dash Knob) not included. For 8 coil and 10 coil application.
3237-V-1192 09-001867 3237-T-1242	6.44" 6.49" 6.50"	7.56" 7.05" 8.37"	100 100 100 80			S446 280 023 0	Kit contains third generation switch and long bracket. S446 280 790 4 (Dash Knob) not included. For 8 coil and 10 coil application
3237-H-1256 3237-V-1062 3237-P-1056	6.51" 6.87" 7.79"	7.30" 7.91" 8.62"	100 100 100			S446 280 790 4	Not included in the parking brake switch replacement kit. For 8 coil and 10 coil application.

mormati	on Grood Herere					
PART NO. ON		PART NO. ON		SERVICE KIT PART NUMBER		
WHITE LABEL	DESCRIPTION	BLUE LABEL	MODULATOR W/ECU	MODULATOR W/O ECU	ECU KIT	
478 407 113 0	12V, RWD, w/ATC	478 407 111 0	400 851 875 0	400 851 878 0	400 851 881 0	
400 850 851 0	12V, RWD, w/ATC	478 407 111 0	400 851 875 0	400 851 878 0	400 851 881 0	
400 851 851 0	12V, RWD, w/ATC	478 408 111 0	400 851 875 0	400 851 878 0	400 851 881 0	
478 407 135 0	12V, RWD, w/ATC	478 407 111 0	400 851 875 0	400 851 878 0	400 851 881 0	
400 850 857 0	12V, RWD, w/ATC	478 407 111 0	400 851 875 0	400 851 878 0	400 851 881 0	
400 851 857 0	12V, RWD, w/ATC	478 408 111 0	400 851 875 0	400 851 878 0	400 851 881 0	
400 850 606 0	12V, FWD	478 407 112 0		400 851 879 0	446 046 922 2	
478 407 114 0	12V, RWD	478 407 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
400 850 852 0	12V, RWD	478 407 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
400 851 852 0	12V, RWD	478 408 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
178 407 132 0	12V, 4x4	478 407 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
400 850 854 0	12V, 4x4	478 407 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
400 851 854 0	12V, 4x4	478 408 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
478 407 136 0	12V, RWD	478 407 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
100 850 858 0	12V, RWD	478 407 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
100 851 858 0	12V, RWD	478 408 112 0	400 851 876 0	400 851 879 0	400 851 882 0	
478 407 116 0	12V, RWD,w/PB	478 407 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
478 407 126 0	12V, RWD, w/PB, w/ATC	478 407 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
400 850 853 0	12V, RWD, w/PB, w/ATC	478 407 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
400 851 853 0	12V, RWD, w/PB, w/ATC	478 408 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
478 407 133 0	12V, RWD, w/PB, 4x4	478 407 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
400 850 855 0	12V, RWD, w/PB, 4x4	478 407 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
400 851 855 0	12V, RWD, w/PB, 4x4	478 408 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
478 407 134 0	12V, RWD, w/PB, w/ATC	478 407 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
400 850 856 0	12V, RWD, w/PB, w/ATC	478 407 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
400 851 856 0	12V, RWD, w/PB, w/ATC	478 408 125 0	400 851 877 0	400 851 880 0	400 851 881 0	
478 407 137 0	12V, RWD, w/PB, w/ATC	478 407 125 0		400 851 880 0	446 046 920 2	

PART NUMBER

S449 711 015 0

S894 590 058 2

S449 711 031 0

R955459

Kit conta	ains two rubber	grommets.			400 851 856 0 478 407 137 0	12V, RWD, w/PB, 12V, RWD, w/PB,		478 408 12 478 407 12
	KIT NUMBER	SENSOR	CAB FEET	LE LEAD METERS	APPLICATION I	NFORMATION	Sens Exte	or nsion
	R955431	S941 032 263 0	2.72	0.83	J 1 J	in heavy front axle	Cable	
	R955430	S441 032 346 0	3.74	1.14	at wheel ends to r	100 - 20,000 GAWR) measure the motion I in ABS applications.		
34 490 307 4					leads, spring clip,	When replacing a		

spring clip, lubricant and instruction sheet. When replacing a sensor you

must also replace the spring clip.

spring clip.

CABLE LEAD

Right Angle (90°) Sensors

	KIT NUMBER	SENSOR	FEET	METERS
	R955432	S941 032 261 0	2.50	0.70
	R955436	S941 032 262 0	2.80	0.86
3	R955434	S941 032 266 0	3.10	0.90
	R955437	S941 032 265 0	3.20	0.99
	R955438	S941 032 267 0	3.30	1.00
	R955433	S941 032 264 0	3.50	1.07
	R955439	S941 032 269 0	4.47	1.46
	R955435	S941 032 268 0	4.60	1.40

APPLICATION INFORMATION Installed at wheel ends to measure **Sensor Clips** the motion of a sensed wheel in ABS applications. Sensor kits include sensor with cable leads,

	S449 711 050 0	16.4	5.0	void the	warranty.
	S449 711 065 0	21.3	6.5		
	S449 711 080 0	26.4	8.0		
	S449 711 100 0	32.8	10.0		
	S449 711 120 0	39.4	12.0		
ì	DADT NUMBER	LD	0.0	LENCTH	ADDITION INCODINATION
ı	PART NUMBER	I.D.	0.D.	LENGTH	APPLICATION INFORMATION
	R955458	0.63" /	0.71"/	1.18" /	Chrome nickel sensor clip.
		16.0 mm	18.0 mm	30.0 mm	Contains sensor clip and grease packet. Holds sensor in place.

30.0 mn

APPLICATION INFORMATION

Features blunt cut cable. Two-wire cable

that connects the wheel end sensors to the

ECU. Do not splice cable wires. Cut cables

from the blunt cut end. Splicing wires will

Copper-beryllium sensor clip.

packet. Holds sensor in place.

Includes sensor clip and grease

LENGTH

METERS

1.5

3.0

0.71"/

16.0 mm 18.0 mm

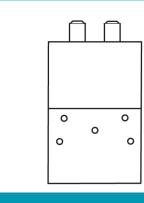
FEET

4.9

0.63"/

© Copyright 2022 WABCO North America LLC - All rights reserved - TP08119 / Revised 04.2022

S478 901 053 2 S478 901 053 2 **Relay Valves**



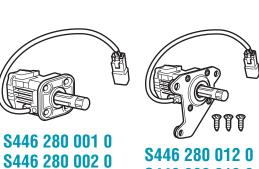
S478 901 053 2

KIT Part Number	APPLICATION INFORMATION
S478 407 929 2	With Automatic Traction Control (ATC). Kit contains relay valve and a seal plate. For 8 coil and 10 coil application.
S478 407 937 2	Without ATC. Kit contains a relay valve and a seal

plate. For 8 coil and 10 coil application.

Parking Brake Switch

Mounted on the cab, not on the HCU

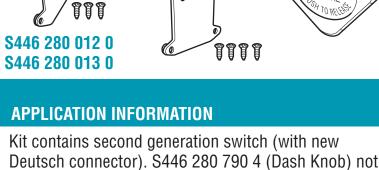


KIT

PART NUMBER

S446 280 001 0

S446 280 002 0



included. For 8 coil and 10 coil application.

Kit contains third generation switch (with Deutsch

(Dash Knob) not included. For 8 coil and 10 coil

connector and redundancy circuit). S446 280 790 4

S446 280 022 0

S446 280 023 0

S446 280 790 4