

# FITTING INSTRUCTIONS

## BP5160035 & BP5160045

### SUITS DEFENDER 110 & 130 FRONT

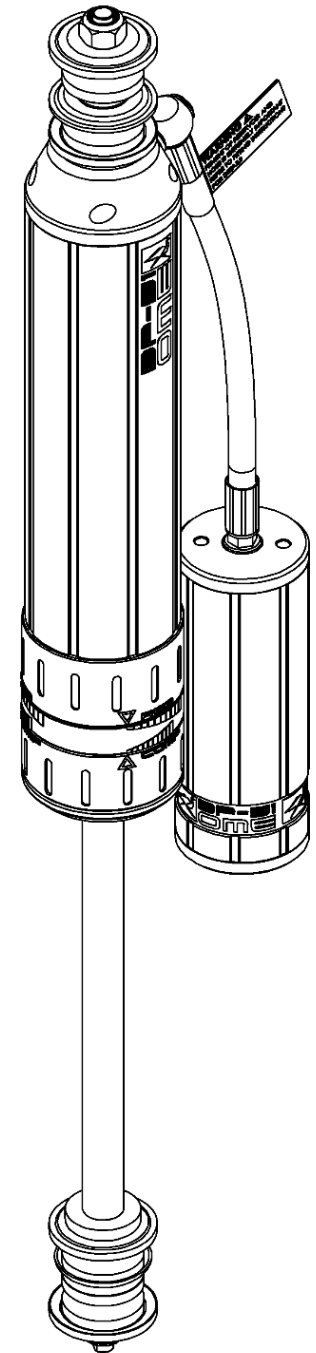
### WARNING

- ◆ This product must be installed exactly as per these instructions using only the hardware supplied.
- ◆ In the event of damage to any suspension component, contact your nearest authorised ARB stockist. Repairs or modifications to the suspension system components must not be attempted.
- ◆ Do not use this product for any vehicle make or model, other than those specified by ARB.
- ◆ Do not remove labels from suspension components.
- ◆ This product or its fixing must not be modified in any way.
- ◆ The installation of this product may require the use of specialized tools and/or techniques
- ◆ It is recommended that this product is only installed by trained personnel
- ◆ These instructions are correct as at the publication date. ARB Corporation Ltd. cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer
- ◆ During installation, it is the duty of the installer to check correct operation/clearances of all components
- ◆ Work safely at all times

**Note:** These fitting instructions should be read in conjunction with the vehicle workshop manual.

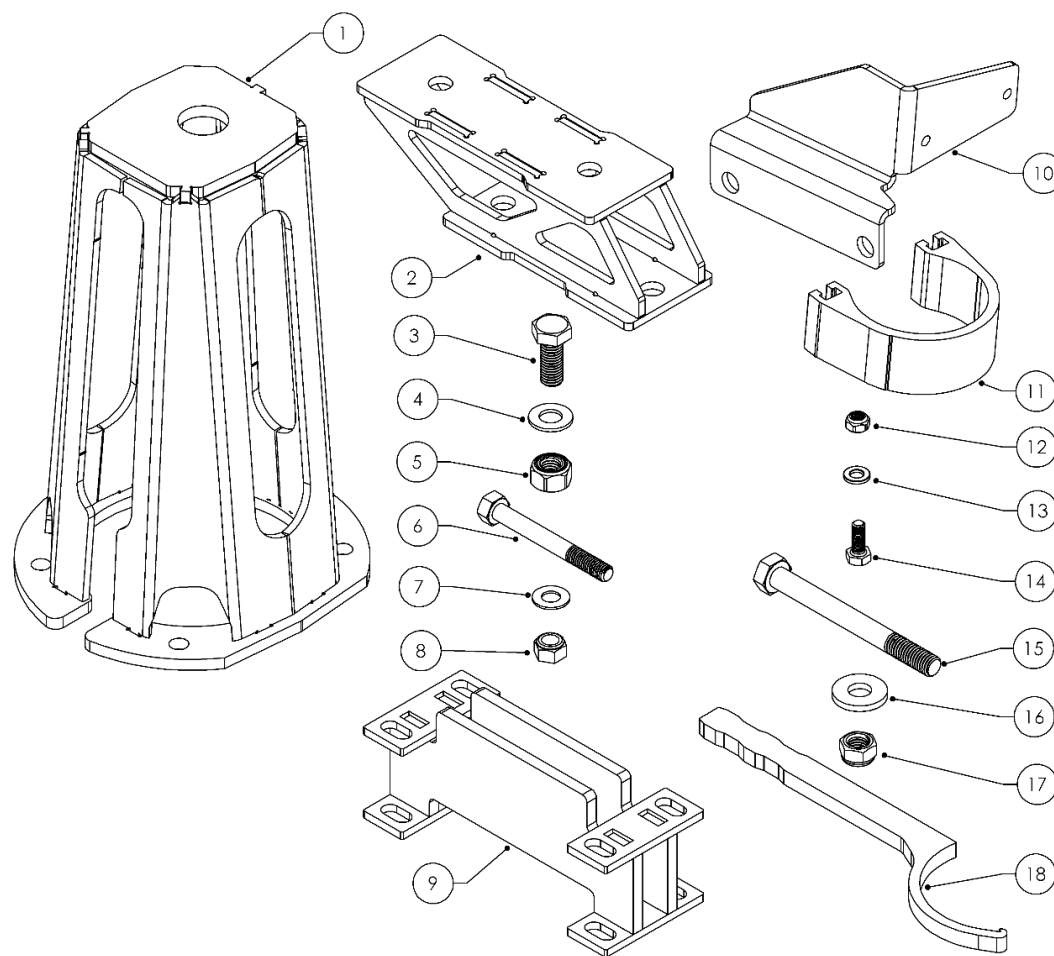
**It is critical these BP-51 dampers are fitted with the correct coil springs. Refer to the Defender long travel page of the OME catalogue to select the appropriate springs for your application.**

**Caution: Front drive shaft MUST be replaced / modified with Double Cardan Joints and checked for Uni bind with BP-51 installed at full droop.**



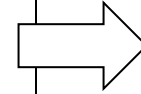
### FITTING KIT CONTENTS – VM80010036

Item	Description	Qty	Spare Part No.
1	SHOCK TOP MOUNT RIGHT (SHOWN)	1	VF60050037RSP
1	SHOCK TOP MOUNT LEFT	1	VF60050037LSP
2	FRONT SWAY BAR SPACER	2	3759125SP
3	M10 X 25MM BOLT	8	6151320SP
4	M10 WASHER BLACK	16	4581291SP
5	M10 NYLOC NUT BLACK	8	VD60010005SP
6	M8 X 70MM BOLT	4	6151910SP
7	M8 WASHER	8	4581045SP
8	M8 NYLOC NUT	4	6151212SP
9	FRONT BUMP STOP SPACER	2	3759134SP
10	FRONT RESI BRACKET RIGHT (SHOWN)	1	VE10020032RSP
10	FRONT RESI BRACKET LEFT	1	VE10020032LSP
11	RESERVOIR CLAMP	2	VE10010003SP
12	M6 NYLOC NUT	4	VD60010003SP
13	M6 WASHER	4	VE70020005SP
14	M6 X 16MM BOLT	4	VD60030003SP
15	M10 X 100MM BOLT	2	6151299SP
16	M10 WASHER	4	4581040SP
17	M10 NYLOC NUT	2	6151322SP
18	ADJUSTER TOOL	1	VC10010071SP

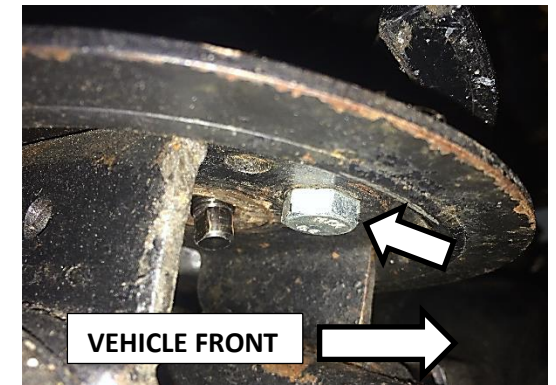
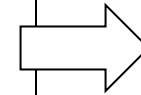


## PREPARATION

Remove OE damper and damper mount from vehicle as per workshop manual.

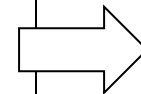


On the lower spring seat, remove the **OE FRONT BOLT ONLY** that secures the bottom spring seat to the axle and refit upside down as shown.



Make clearance for the new mount and the BP-51 as shown in the picture.

This may involve removing accessories in the engine bay to get access from the top to fit the BP-51 and the shock mount.



## DAMPER MOUNTING SEQUENCE

The BP-51 needs to be fitted with the suspension in droop.

1. Remove nut, retaining washer and bush from top and bottom as shown in the diagram.

Lower the shock and locate it into the lower shock mount. Note that the orientation of the reservoir hose is pointing towards the front of the vehicle.

2. Lower the new supplied shock mount over the BP-51 onto the top of the spring seat. Reuse the OE nuts and securely tighten them.

**Torque (Refer to OE specification).**

Fit the bush, retaining washer and the nut. Refer to the diagram for assembly sequence. Fasten the top nut against the retaining washer.

**Torque to 70 N.m**

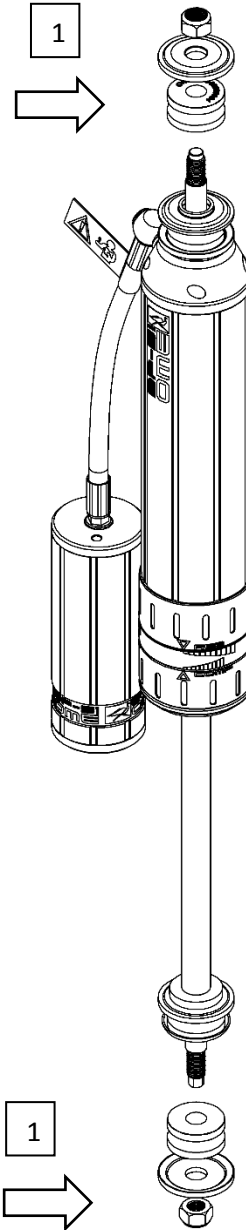
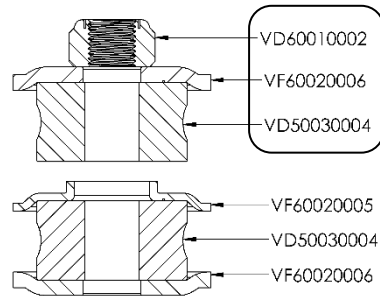
3. Position the hose fitting in the middle of slot as shown in the picture.

4. Fit the bottom bush and retaining washer to the shaft.

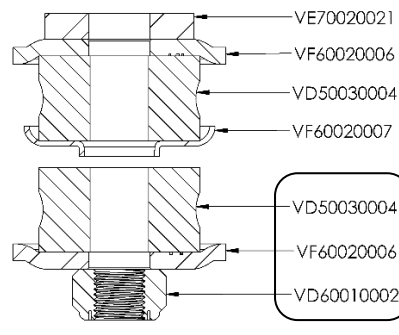
Then secure with the nut as shown by the picture.

The Nyloc nut should be firmly secured against the retaining washer until it bottoms out.

### BUSH KIT VM50010005



### BUSH KIT VM50010023



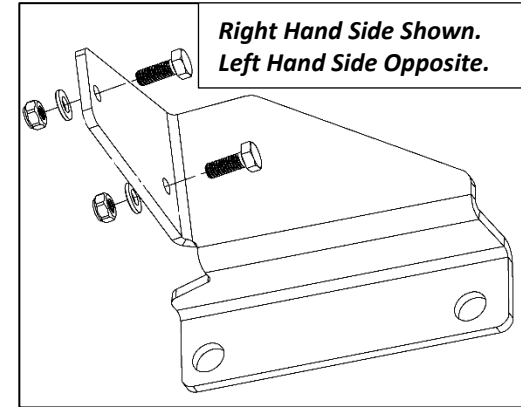
## RESERVOIR MOUNTING SEQUENCE (LHS and RHS are different)

Pre-assemble the supplied M6 fasteners to both resi brackets as shown finger tight. Note washer on the nut side.

### RIGHT HAND SIDE

Remove the two lower bolts that secure the steering box onto chassis shown in the picture.

Fit the reservoir mounting bracket as shown.  
Re use OE bolts.  
***Torque (Refer to OE specification).***



## RESERVOIR MOUNTING CONTINUED... 2/3

### LEFT HAND SIDE

Fit the reservoir mounting bracket to the chassis using the two unused holes shown in the picture.

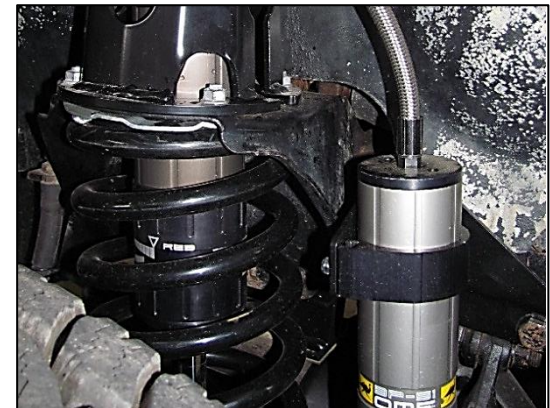
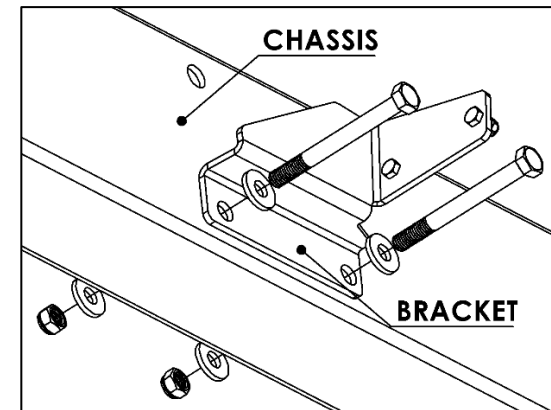
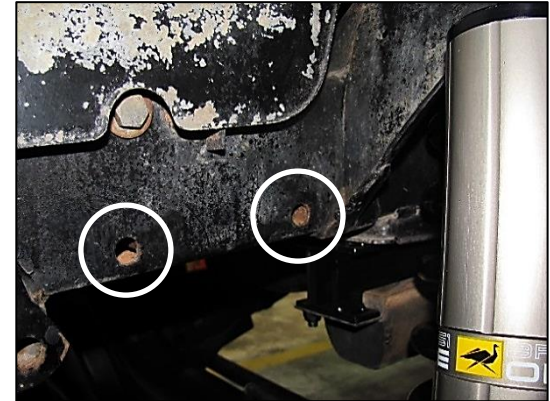
Use the supplied M10 X 100 bolts, washers and Nyloc nuts as shown in the diagram.

***Torque to 44 N.m***

### BOTH SIDES

Fit the mounting saddle to the reservoir and slide over the heads of the bolts in the mounting bracket.

Tighten the Nyloc nuts until there is little movement for the reservoir.



## RESERVOIR MOUNTING CONTINUED... 3/3

### THIS PROCESS IS CRITICAL!

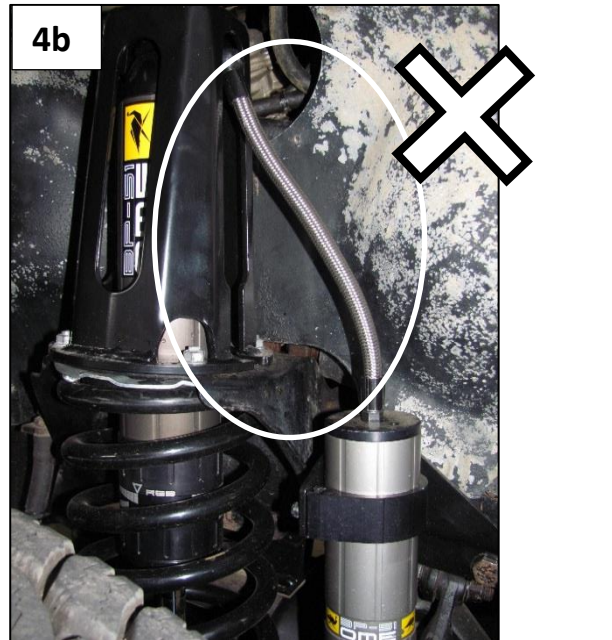
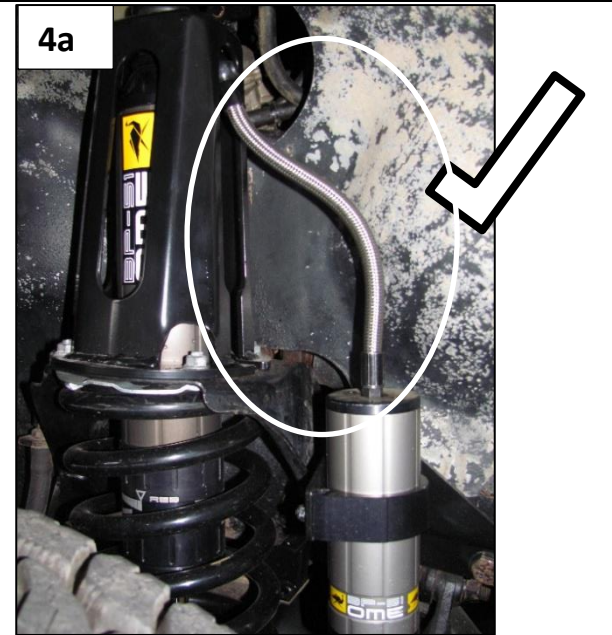
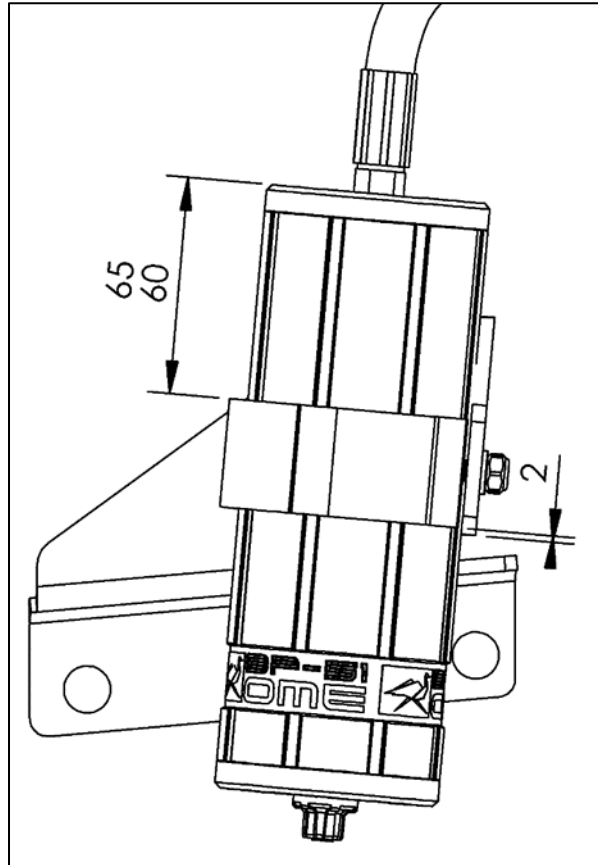
There has to be enough slack in the hose to allow the hose to straighten or curve during the vehicle motion.

### CAREFULLY FOLLOW THE STEPS BELOW:

1. With one hand securely holding the saddle, use the other hand to move the reservoir upwards. Rotate the reservoir to help move it upwards.
2. When the distance between the top face of the reservoir and the saddle is achieved, position the hose in the middle of the slot which is in the top damper mount and then securely tighten the nuts.  
**Torque to 12 N.m**
3. Double check the distance again after the nuts are firmly secured.

**Important.** Refer to picture (4a) and (4b) for the correct profile of the hose after fitment.

FOR REFERENCE ONLY, ENSURE STEP 4 IS ACHIEVED.

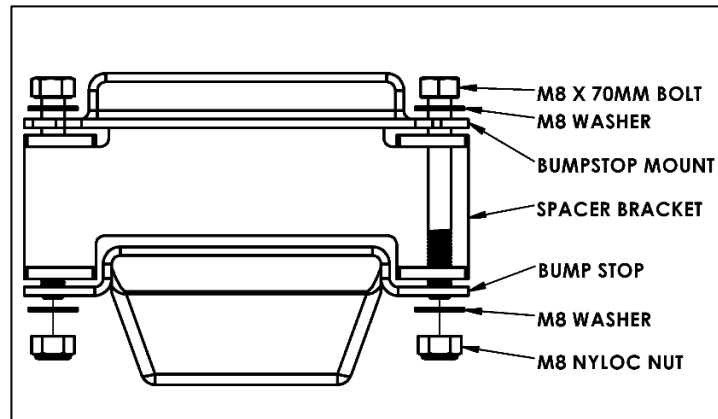


## FRONT BUMP STOP SPACER

Remove the front Bump Stop.

Install the supplied bump bracket between the bump stop and the chassis with the new supplied fasteners as shown in the picture and diagram below.

***Torque to 12 N.m***





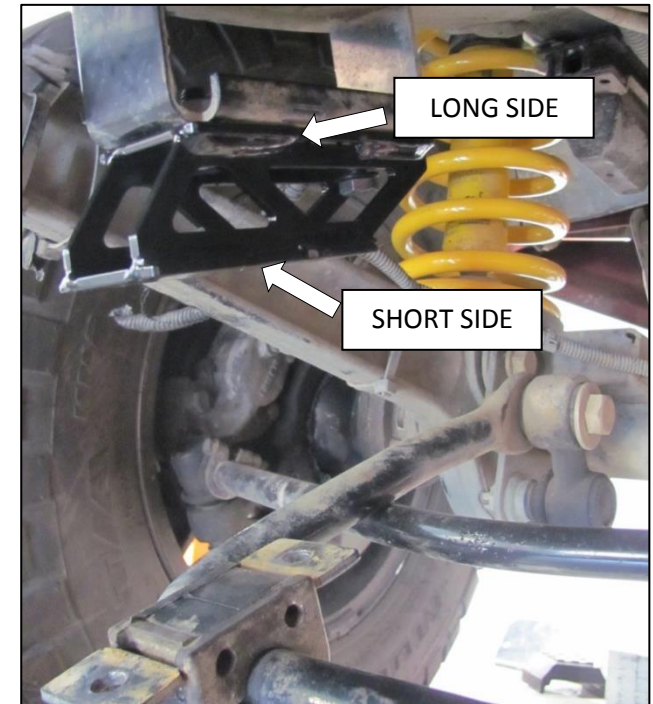
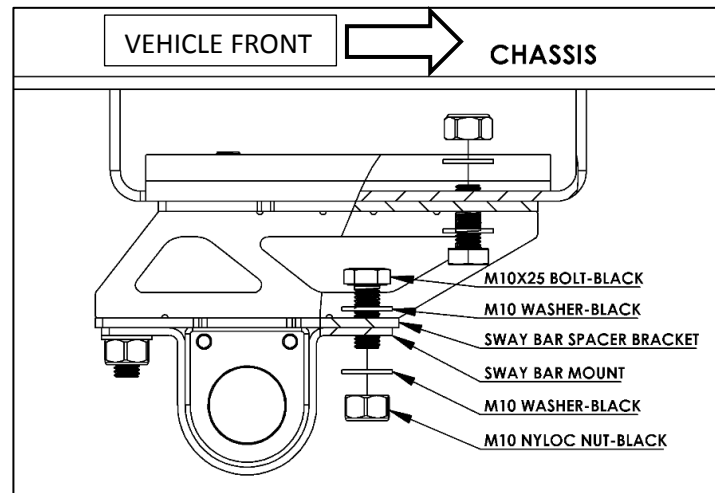
## FRONT SWAY BAR SPACER

Remove the sway bar at the chassis mount

Install the supplied sway bar brackets with the new supplied fasteners to the vehicle as shown in the picture.

Raise the sway bar to meet the brackets and install the remaining M8 fasteners as shown in the diagram.

**Torque to 22 N.m**



## DAMPING ADJUSTMENT

These dampers have been set in the factory to be used for a vehicle with certain load.

If your load or accessory fitment differs, use the table below as a guide for recommended compression and rebound adjuster settings.

Part Number	Front accessories	Compression	Rebound
BP5160035	Bar & Winch	4-8	6-10
	Bar only	2-6	5-9
	No accessories	0-4	4-8
Factory setting		3	6
BP5160045	Bar & Winch	4-8	6-10
	Bar only	2-6	5-9
	No accessories	0-4	4-8
Factory setting		0	4

## SPECIFICATIONS

1	BP5160035 & BP5160045	Extended Length	606 mm
		Compressed Length	364 mm

## SPARE PARTS

Refer to Service And Part manual section:

- For BP5160035 see **BP-51 S&P 3.1-BP5160035**
- For BP5160045 see **BP-51 S&P 3.1-BP5160045**

