# PARTS & SERVICE NEWS

| REF NO. | AA00099 |
|---|---|
| DATE | Aug. 9, 200 |



**SUBJECT:** REPAIR OF OIL LEAKAGE FROM SUSPENSION (AIR BLEED VALVES)

**PURPOSE:** To describe the repair method

**APPLICATION:** HD465-3 Dump Trucks, S/N 2001 thru 3054 (Rear Suspension)
HD465-5 Dump Trucks, S/N 4001 thru 4278 (Rear Suspension)
HD785-2 Dump Trucks, S/N 1501 thru 2001 (Rear Suspension)
HD785-3 Dump Trucks, S/N 2001 thru 2310 (Front & Rear Suspension)
330M Dump Trucks, S/N 24482 and up

**FAILURE CODE:** 5A3G10

**DESCRIPTION:**

If oil keeps oozing out of the air bleed hole when the air bleed valve of the suspension cylinder is tightened to the specified torque, repair it according to this **PARTS & SERVICE NEWS.** Disregarding Parts & Service News A920175 regarding this condition. If oil leaks from a part other than the suspension, see Installation Manual B920046.

2. Repair parts list

1) HD465-3 (For rear suspension)
HD465-5 (For rear suspension)

| No. | Part No. | Part Name | Q'ty | Purpose of part | Remarks |
|---|---|---|---|---|---|
| | 569-50-62002<br>(569-50-62001) | R. SUS Ass'y<br>(R. SUS Ass'y) | 2<br>(2) | Reworked | Rear suspension of HD465-5 |
| | 569-50-64002<br>(569-50-64001) | R. SUS Ass'y<br>(R. SUS Ass'y) | 2<br>(2) | | For rear suspension with payload meter of HD465-5 |
| | 569-50-32002<br>(569-50-32001) | R. SUS Ass'y<br>(R. SUS Ass'y) | 2<br>(2) | | Rear suspension of HD465-3 |
| 1 | 569-50-12153<br>(569-50-12150) | Flange<br>(Flange) | 2<br>(2) | | |
| 2 | 569-50-11131<br>(569-50-11130) | Retainer<br>(Retainer) | 2<br>(2) | | |
| 3 | 569-50-11141<br>(569-50-11140) | Plate<br>(Plate) | 2<br>(2) | | Add cut to air bleed valve |
| 4 | 566-50-21260<br>(566-50-21260) | Valve<br>(Valve) | 2<br>(2) | | |
| 5 | 569-50-11230<br>(569-50-11230) | Packing<br>(Packing! | 2<br>(2) | | |
| 6 | 561-50-61370<br>(561-50-61370) | Seal<br>(Seal) | 2<br>(2) | Replacement | |
| 7 | 07000-15210<br>(07000-15210) | O-ring<br>(O-ring) | 2<br>(2) | | |
| 8 | 07001-052 10<br>(07001-05210) | Back up ring<br>(Back up ring) | 2<br>(2) | | Consumable parts for replacement |
| 9 | 569-50- 11240<br>(569-50-11240) | Bushing<br>(Bushing) | 2<br>(2) | | |
| 10 | 569-50-11221<br>(569-50-11220) | Bushing<br>(Bushing) | 2<br>(2) | | |
| 11 | 566-50-11350<br>(566-50-11350) | Packing<br>(Packing) | 2<br>(2) | | |
| 12 | 07043-00108<br>(07043-00108) | Plug<br>Plug) | 2<br>(2) | | |
| 13 | 09920-00150 | Gasket | 1 | Addition | Use when assembling SUS Ass'y.<br>It is big enough to use with about 4 units of SUS Ass'y |

2) HD785-3 (For front suspension)

| No. | Part No. | Part Name | Q'ty | Purpose of part | Remarks |
|---|---|---|---|---|---|
| | 561-50-61004<br>(561-50-61003) | F. SUS Ass'y<br>(F. SUS Ass'y) | 2<br>(2) | Reworked | For standard front suspension of HD785-3 for overseas market |
| | 561-50-63004<br>(561-50-63003) | F. SUS Ass'y<br>(F. SUS Ass'y) | 2<br>(2) | | For standard front suspension of HD785-3 for domestic market |
| 1 | 561-50-61143<br>(561-50-61142) | Flange<br>(Flange) | 2<br>(2) | Replacement | Consumable parts for replacement |
| 2 | 569-50-11131<br>(569-50-11130) | Retainer<br>(Retainer) | 2<br>(2) | | |
| 3 | 569-50-11141<br>(569-50-l 1140) | Plate<br>(Plate) | 2<br>(2) | | |
| 4 | 566-50-21260<br>(566-50-21260) | Valve<br>(Valve) | 2<br>(2) | | |
| 5 | 569-50-11230<br>(569-50-11230) | Packing<br>(Packing) | 2<br>(2) | | |
| 6 | 561-50-61370<br>(561-50-61370) | Seal<br>(Seal) | 2<br>2 | | |
| 7 | 07000-15210<br>(07000-15210) | O-ring<br>(O-ring) | 2<br>(2) | | |
| 8 | 07001-05210<br>(07001-05210) | Back up ring<br>(Back up ring) | 2<br>(2) | | |
| 9 | 569-50-11220<br>(569-50-11220) | Bushing<br>(Bushing) | 2<br>(2) | | |
| 10 | 569-50-11340<br>(569-50-11340) | Bushing<br>(Bushing) | 2<br>(2) | | |
| 11 | 566-50-11350<br>(566-50-11350) | Packing<br>(Packing) | 2<br>(2) | | |
| 12 | 07043-00108<br>(07043-00108) | Plug<br>(Plug) | 2<br>(2) | | |
| 13 | 09920-00150 | Gasket | 1 | Addition | Use when assembling SUS Ass'y.<br>It is big enough to use with about 4 units of SUS Ass'y |

3) HD785-2 (For rear suspension)
HD785-3 (For rear suspension)

| No. | Part No. | Part Name | Q'ty | Purpose of part | Remarks |
|---|---|---|---|---|---|
| | 561-50-62003<br>(561-50-62002) | R. SUS Ass'y<br>(R. SUS Ass'y) | 2<br>(2) | | Rear suspension of HD785-3 |
| | 561-50-64003<br>(561-50-64002) | R. SUS Ass'y<br>(R. SUS Ass'y) | 2<br>(2) | Reworked | For rear suspension with payload meter of HD785-3 |
| | 561-50-12001<br>(561-50-12000) | R. SUS Ass'y<br>(R. SUS Ass'y) | 2<br>(2) | | Rear suspension of HD785-2 |
| 1 | 568-50-11153<br>(568-50-11152) | Flange<br>(Flange) | 2<br>(2) | | |
| 2 | 568-50-11132<br>(568-50-11131) | Retainer<br>(Retainer) | 2<br>(2) | | |
| 3 | 568-50-11141<br>(568-50-11140) | Plate<br>(Plate) | 2<br>(2) | | |
| 4 | 566-50-21260<br>(566-50-2 1260) | Valve<br>(Valve) | 2<br>(2) | | |
| 5 | 568-50-11290<br>(568-50-11290) | Packing<br>(Packing) | 2<br>(2) | | |
| 6 | 561-50-62370<br>(561-50-62370) | Seal<br>(Seal) | 2<br>(2) | Replacement | |
| 7 | 07000-15240<br>(07000-15240) | O-ring<br>(O-ring) | 2<br>(2) | | |
| 8 | 07001-05240<br>(07001-05240) | Back up ring<br>(Back up ring) | 2<br>(2) | | Consumable parts for replacement |
| 9 | 568-50-11330<br>(568-50-11330) | Bushing<br>(Bushing) | 4<br>(4) | | |
| 10 | 568-50-1 1230<br>(568-50- 1123[illegible]) | Bushing<br>(Bushing) | 2<br>(2) | | |
| 11 | 566-50-1135[illegible]<br>(566-50-11350) | Packing<br>(Packing) | 2<br>(2) | | |
| 12 | 07043-00108<br>(07043-00108) | Plug<br>(Plug) | 2<br>(2) | | |
| 13 | 09920-00150 | Gasket | 1 | Addition | Use when assembling SUS Ass'y.<br>It is big enough to use with about 4 units of SUS Ass'y |

## 3. Contents of repair

### 3-1 Structures of air bleed valves before/after repair

The structures of air bleed valves before/after repair are shown in Fig. 1.

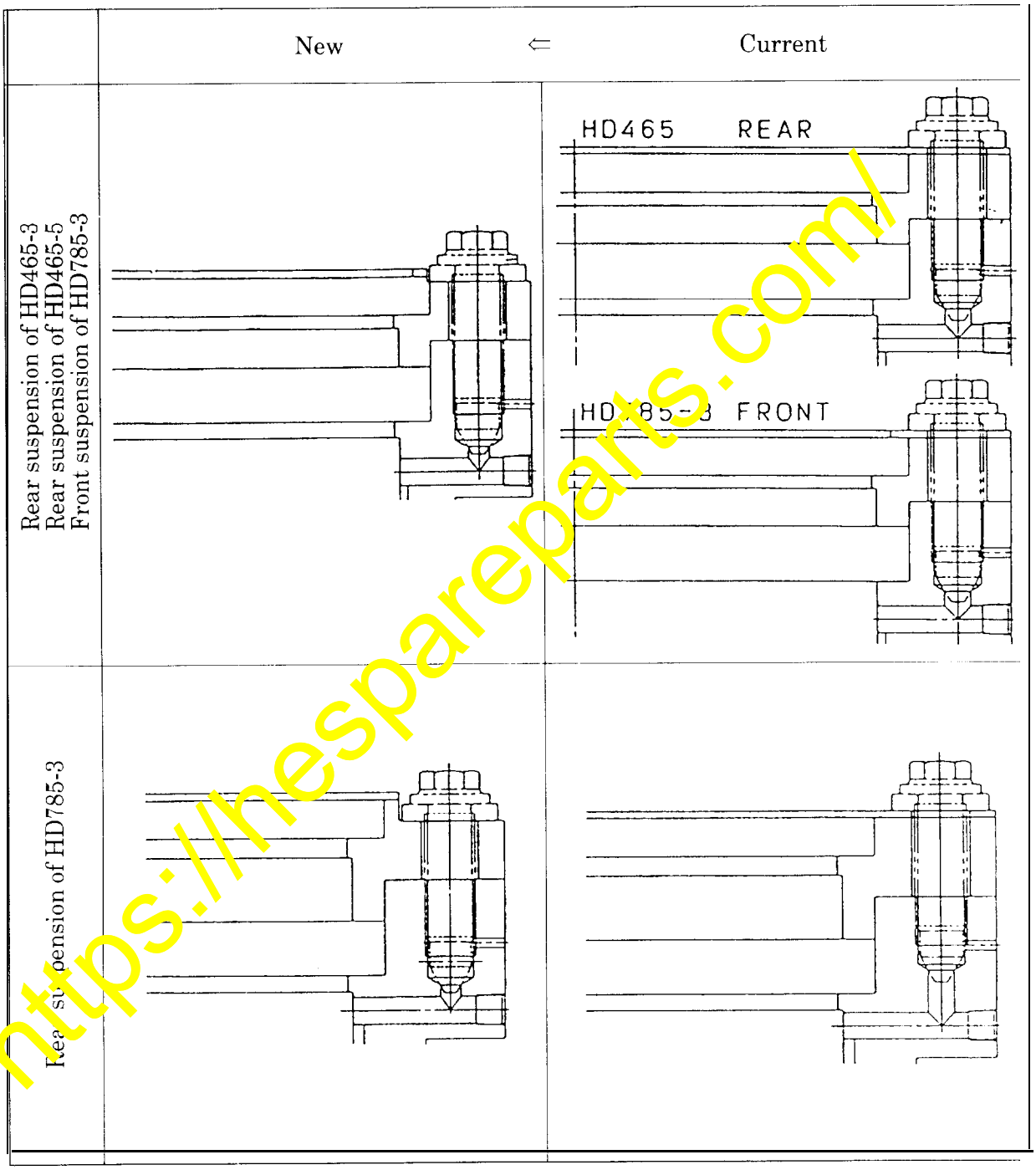



Fig. 1 Structures of air bleed valves before/after repair

3-2 Rear suspensions of HD465-3 and HD465-5

(1) Park the vehicle on a level place and apply the parking brake.

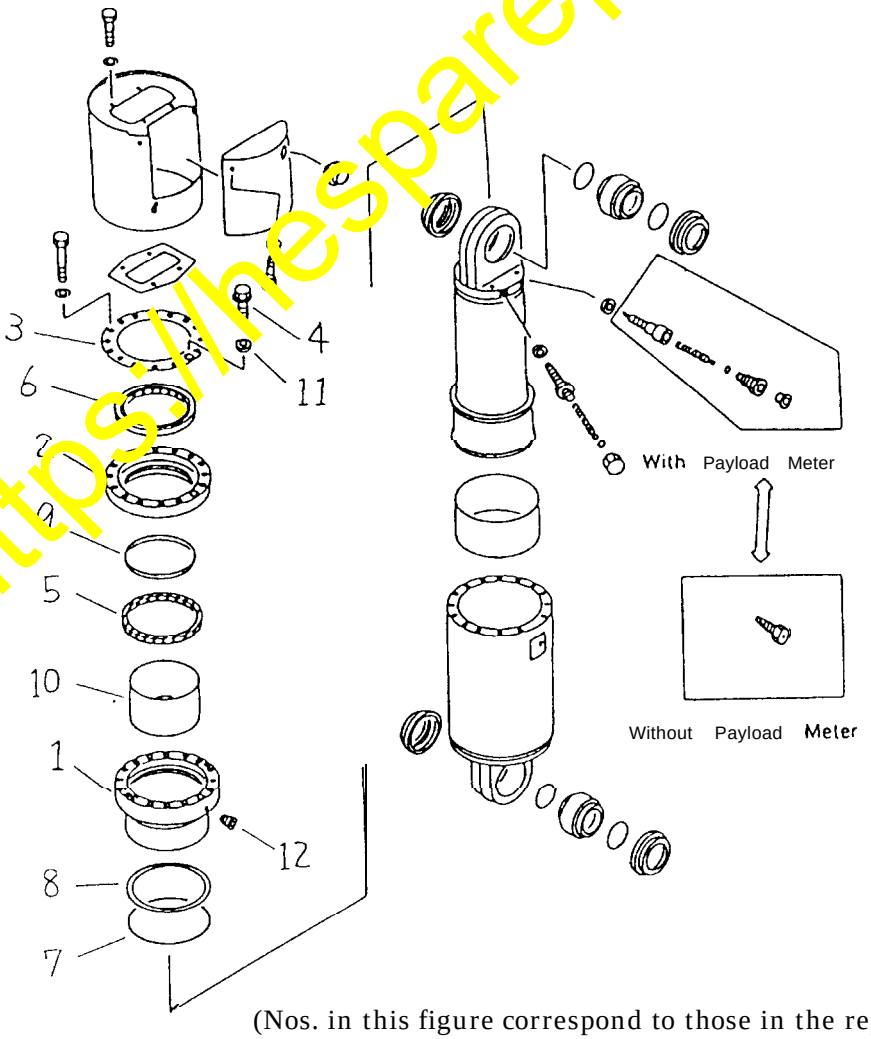
(2) Insert a spacer (25 mm thick) between the frame and rear axle. Open the suspension oil level valve to release the gas from the suspension. For details, see "Inspection and adjustment of suspension cylinder" in the Shop Manual.

(3) Pull out the pin on the rod side of the suspension and sling the suspension temporarily. For details, see "Removal of rear suspension cylinder assembly" in the Shop Manual.

(4) Fix the bottom side of the suspension to prevent it from falling, then remove the flange mounting bolts.

(5) Pull out the temporarily -slung rod, together with the flange.

(6) Replace the flange and retainer with the improved ones according to Fig. 2. At this time, replace the air bleed valve with a new one, too. Also replace the consumable parts such as the packings, O-rings, etc., according to the list of repair parts. For details of disassembly and reassembly, see "Disassembly and reassembly of rear suspension cylinder assembly" in the Shop Manual.




(Nos. in this figure correspond to those in the repair parts list.)

Fig. 2 Rear suspension of HD465-3 and HD465-5

(7) Clean the interior of the bottom of the suspension, and insert the rod with flange. For details, see “Assembly of rear suspension cylinder assembly” in the Shop Manual.

(8) For installation and adjustment of the suspension cylinder assembly, see “Installation of rear suspension cylinder assembly” and “Inspection and adjustment of suspension cylinder” in the Shop Manual.

3-3 Front suspension of HD785-3

(1) Park the vehicle on a level place and apply the parking brake.

(2) Jack up the front part of the vehicle until the front tires are off the ground and secure it with wood blocks, etc. Remove the front tires.

(3) Open the suspension oil level valve to release the gas from the suspension. For details, see “Inspection and adjustment of suspension cylinder” in the Shop Manual.

(4) Remove the pin on the rod side of the front suspension and tilt the cylinder assembly outward from the vehicle.

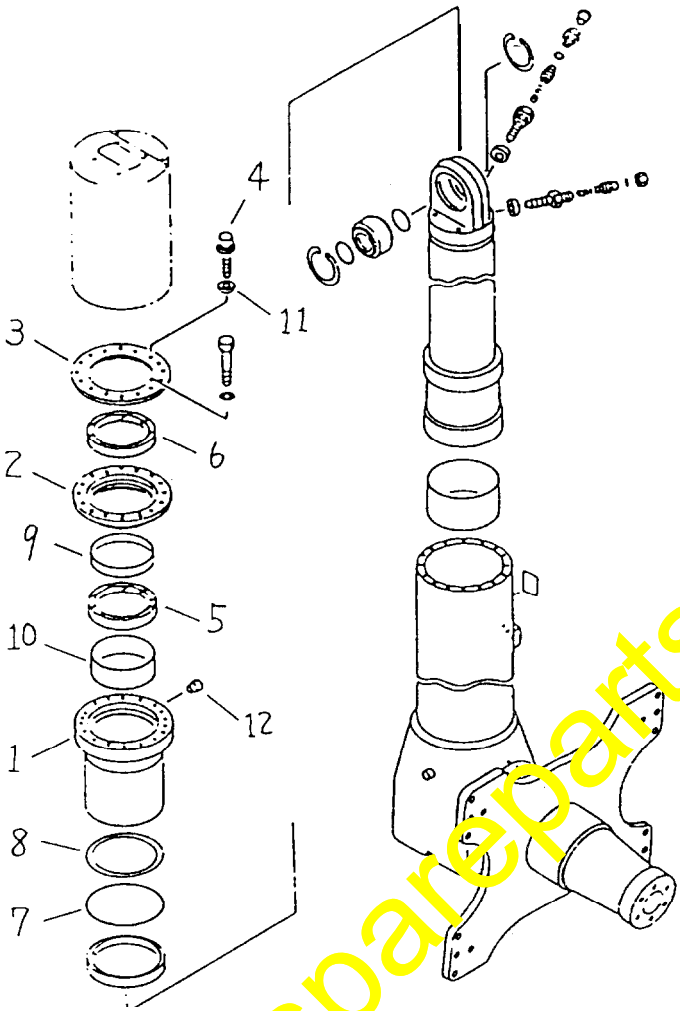
(5) Fix the bottom side of the suspension so that it will not fall, then remove the flange mounting bolts.

(6) Pull out the rod and flange together.

(7) Replace the flange and retainer with the improved ones according to Fig. 3. At this time, replace the air bleed valve with a new one, too. Also replace the consumable parts such as the packings, O-rings, etc., according to the repair parts list. For details of disassembly and reassembly, see “Disassembly and reassembly of front suspension cylinder assembly” in the Shop Manual.

(8) Clean the interior of the bottom of the suspension, and insert the rod with flange. For details, see “Assembly of front suspension cylinder assembly” in the Shop Manual.

(9) For installation and adjustment of suspension cylinder assembly, see "Installation of rear suspension cylinder assembly” and “Inspection and adjustment of suspension cylinder” in the Shop Manual.




(Nos. in this figure correspond to those in the repair parts list.)

Fig. 3 Front suspension of HD785-3

3-4 Rear suspension of HD785-2 and HD785-3

(1) Park the vehicle on a level place and apply the parking brake.

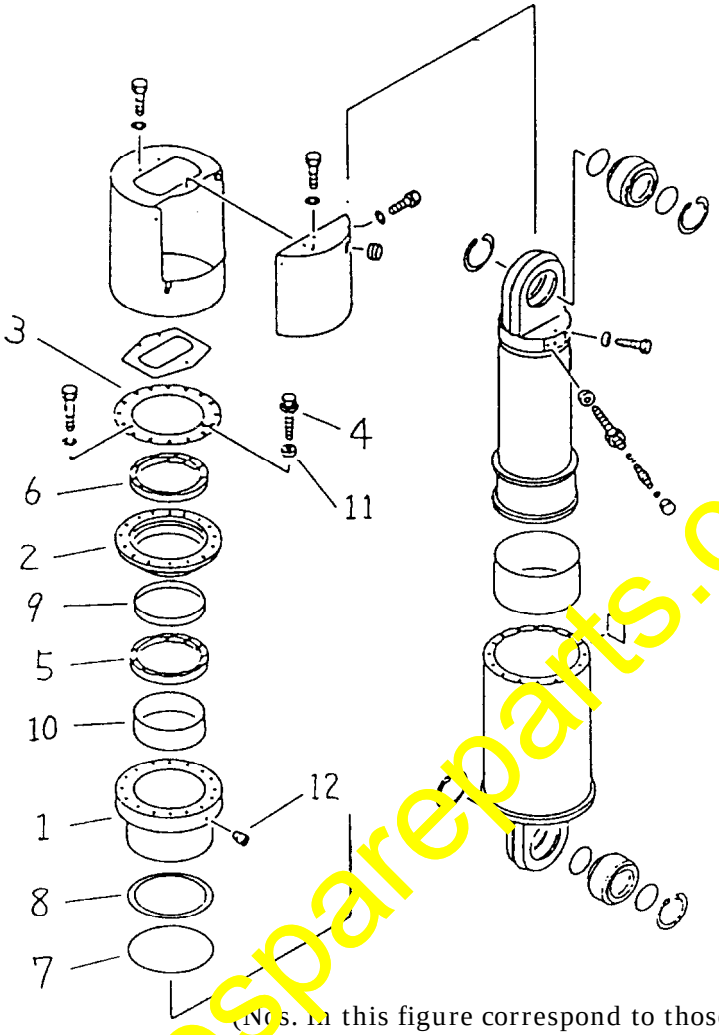
(2) Insert a spacer (40 mm thick) between the frame and rear axle. Open the suspension oil lever valve to release the gas from the suspension. For details, see "Inspection and adjustment of suspension cylinder" in the Shop Manual.

(3) Pull out the pin on the rod side of the suspension and sling the suspension temporarily. For details, see "Removal of rear suspension cylinder assembly" in the Shop Manual.

(4) Fix the bottom side of the suspension so that it will not fall, then remove the flange mounting bolts.

(5) Pull out the temporarily -slung rod, together with the flange.

(6) Replace the flange and retainer with the improved ones according to Fig. 4. At this time, replace the air bleed valve with a new one, too. Also replace the consumable parts such as the packings, O-rings, etc., according to the repair parts list. For details of disassembly and reassembly, see "Disassembly and reassembly of rear suspension cylinder assembly" in the Shop Manual.




(Nos. in this figure correspond to those in the repair parts list.)

Fig. 4 Rear suspension of HD785-2 and HD785-3

(7) Clean the interior of the bottom of the suspension, and insert the rod with flange. For details, see "Assembly of rear suspension cylinder assembly" in the Shop Manual.

(8) For installation and adjustment of suspension cylinder assembly, see "Installation of rear suspension cylinder assembly" in the Shop Manual.

3. Precautions for assembly

(1) Tightening torque of air bleed valve

Tighten the air bleed valve after adjusting the oil level in the suspension. Do not apply any torque to it while the suspension is being assembled.

kgm Tightening torque of air bleed valve after adjusting oil level
44.1 N-m (Range: 39.2 — 49.0 N-m)
{4.5 kgf-m (Range: 4 — 5 kgf-m)}

**A** Take care not to exceed the specified tightening torque for the air bleed valve. If it is over-tightened, leakage may occur.

(2) When repairing according to the this SERVICE NEWS, be sure to replace the air bleed valve, too. When replacing, confirm that you are installing the improved one shown in Table 1.

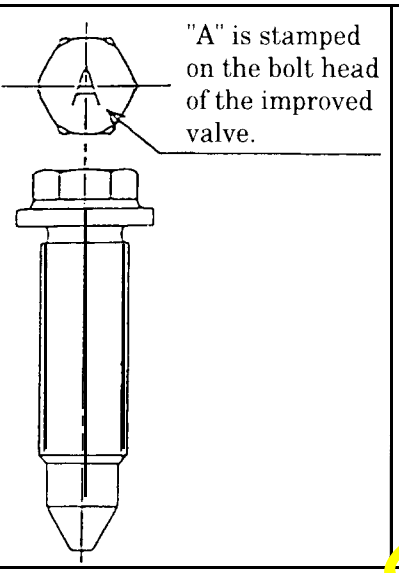
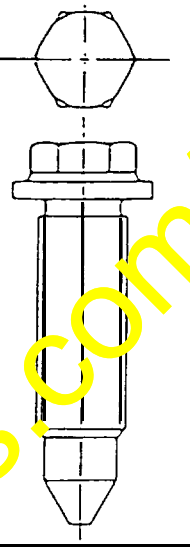
| | New valve (Improved) ⇐ | Current valve |
|---|---|---|
| Shape |   |  |
| Hue | Dark brown | Plating color |
| Part No. | 566-50-21260 | 566-50-11262 |

Table 1 Distinction of improved valve (introduced in A920175)

(3) Tightening torque for flange mounting bolt
After assembling the suspension, tighten the flange mounting bolts to the following torque.

| |
|---|
| Rear suspension of HD465 and front suspension of HD785 |
| 112.8 N-m {Range: 98.0 - 122.6 N-m} |
| 111.5 kg-m {Range: 10.0 - 12.5 kg-m} |
| Rear suspension of HD785 |
| 176.5 N-m (Range: 156.9 - 196.1 N-m) |
| 113.0 kg-m (Range: 16.0 - 20.0 kg-m)} |

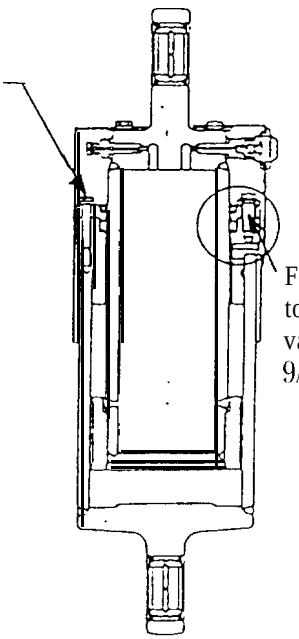



Fig. 5 Tightening torque of flange mounting bolt

(3) Applying the liquid gasket

When re-assembling the suspension, apply liquid gasket (Part No. 09920-00150) all over the mating face, of the retainer (Fig. 2-2 thru Fig. 4-2), and the flange (Fig. 2-l thru Fig. 4-l). (Only a slight application is good enough.)

Be careful not to apply excessive liquid gasket sealer, in particular, it must not adhere or penetrate inside the suspension or onto the surface of the U-packing.

For more information, read the precautions printed on the liquid gasket container.

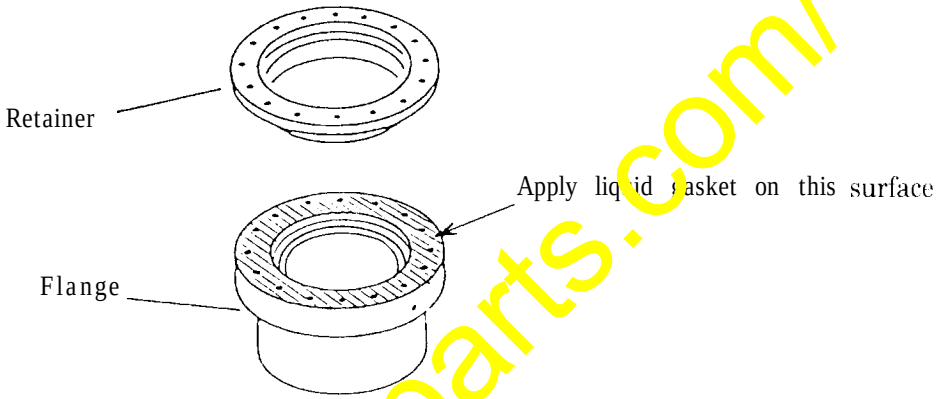



Fig. 6 Where to apply the liquid gasket