

PARTS & SERVICE NEWS

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SUBJECT: MODIFICATION TO PREVENT CRACK IN FRONT FRAME ON HM400-1 AND HM350-1

PURPOSE: To introduce modification procedure to prevent occurrence of cracks in the front frame on HM400-1 and HM350-1 articulated dump trucks

APPLICATION: HM400-1 Articulated Dump Trucks, }
HM350-1 Articulated Dump Trucks, } Refer to page 2 for Serial Nos.

FAILURE CODE: 4700HA

DESCRIPTION:

1. Introduction

On the HM400-1 and HM350-1 articulated dump trucks, there is a possibility of occurrence of cracks in the front frame.

Therefore, make the modification being introduced in this Service News to prevent occurrence of the aforementioned cracks.

2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
56B-99-11840	Plate	} Additional	1	
56B-99-11850	Plate		1	
56B-99-12120	Plate		1	

3. Table of the applicable vehicles to this modification

HM400-1: Table of Serial No. of the applicable vehicles
(Total 59 vehicles)

HM350-1: Table of Serial No. of the applicable vehicles
(Total 37 vehicles)

No.	Country	Model	Serial No.	Destination	Customer's name
1	U.S.A.	HM400-1	1001	U.S.A.	
2	(47 vehicles)	HM400-1	1002	U.S.A.	
3		HM400-1	1003	U.S.A.	
4		HM400-1	1007	U.S.A.	Longhorn Excavating
5		HM400-1	1008	U.S.A., MD	Central Contracting
6		HM400-1	1010	U.S.A., TX	Longhorn Excavating
7		HM400-1	1014	U.S.A., TX	Longhorn Excavating
8		HM400-1	1015	U.S.A., TX	Longhorn Excavating
9		HM400-1	1016	U.S.A., OK	Martin Marietta
10		HM400-1	1017	U.S.A., OH	Sidwell Materials
11		HM400-1	1018	U.S.A., OH	Sidwell Materials
12		HM400-1	1019	U.S.A., OH	Sidwell Materials
13		HM400-1	1020	U.S.A., AK	City of Fort Smith
14		HM400-1	1021	U.S.A., FL	URS Corporation
15		HM400-1	1022	U.S.A., FL	URS Corporation
16		HM400-1	1023	U.S.A., MD	Central Contracting
17		HM400-1	1028	U.S.A., FL	URS Corporation
18		HM400-1	1029	U.S.A., FL	URS Corporation
19		HM400-1	1030	U.S.A., TX	Longhorn Excavating
20		HM400-1	1031	U.S.A., TX	Longhorn Excavating
21		HM400-1	1033	U.S.A., TX	Longhorn Excavating
22		HM400-1	1034	U.S.A., FL	McDonald Construction
23		HM400-1	1035	U.S.A., FL	McDonald Construction
24		HM400-1	1036	U.S.A., OH	Sidwell Materials
25		HM400-1	1037	U.S.A., FL	McDonald Construction
26		HM400-1	1038	U.S.A., OH	Sidwell Materials
27		HM400-1	1039	U.S.A., OH	Sidwell Materials
28		HM400-1	1040	U.S.A., TX	Lattimore Materials
29		HM400-1	1041	U.S.A., OH	Sidwell Materials
30		HM400-1	1042	U.S.A.	
31		HM400-1	1043	U.S.A.	
32		HM400-1	1044	U.S.A.	
33		HM400-1	1046	U.S.A.	
34		HM400-1	1048	U.S.A.	
35		HM400-1	1049	U.S.A.	
36		HM400-1	1053	U.S.A.	
37		HM400-1	1054	U.S.A.	
38		HM400-1	1055	U.S.A.	
39		HM400-1	1056	U.S.A.	
40		HM400-1	1057	U.S.A.	
41		HM400-1	1058	U.S.A.	
42		HM400-1	1059	U.S.A.	
43		HM400-1	1060	U.S.A.	
44		HM400-1	1061	U.S.A.	
45		HM400-1	1062	U.S.A.	
46		HM400-1	1063	U.S.A.	
47		HM400-1	1064	U.S.A.	
48		Indonesia	HM400-1	1026	Indonesia
49	Australia	HM400-1	1071	Australia	
50	(6 vehicles)	HM400-1	1072	Australia	
51		HM400-1	1073	Australia	
52		HM400-1	1074	Australia	
53		HM400-1	1075	Australia	
54		HM400-1	1076	Australia	
55		Rep. of South Africa	HM400-1	1024	Rep. of South Africa
56	(3 vehicles)	HM400-1	1025	Rep. of South Africa	
57		HM400-1	1047	Rep. of South Africa	
58		Belgium	HM400-1	1065	Belgium
59	(2 vehicles)	HM400-1	1067	Belgium	

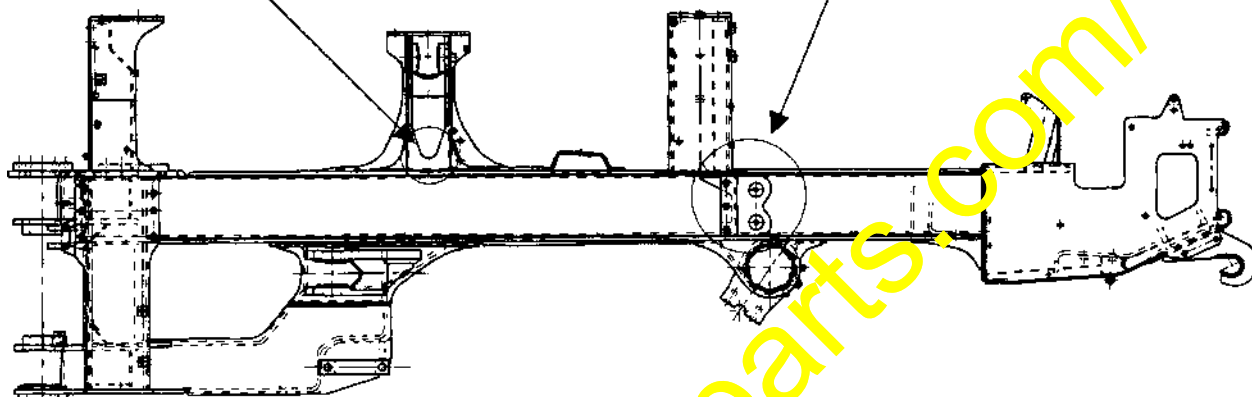
No.	Country	Model	Serial No.	Destination	Customer's name
1	U.S.A.	HM350-1	1001	U.S.A., OK	United General
2	(34 vehicles)	HM350-1	1002	U.S.A., FL	URS Corporation
3		HM350-1	1003	U.S.A., OH	Beaver Excavating
4		HM350-1	1005	U.S.A., OH	Beaver Excavating
5		HM350-1	1007	U.S.A., MS	Eutaw Construction
6		HM350-1	1008	U.S.A., MS	Eutaw Construction
7		HM350-1	1010	U.S.A., MS	Eutaw Construction
8		HM350-1	1012	U.S.A., MS	Eutaw Construction
9		HM350-1	1013	U.S.A., MS	Eutaw Construction
10		HM350-1	1014	U.S.A., OK	United General
11		HM350-1	1015	U.S.A.	
12		HM350-1	1016	U.S.A.	
13		HM350-1	1017	U.S.A., OK	United General
14		HM350-1	1018	U.S.A.	
15		HM350-1	1019	U.S.A.	
16		HM350-1	1020	U.S.A.	
17		HM350-1	1021	U.S.A.	
18		HM350-1	1022	U.S.A.	
19		HM350-1	1023	U.S.A.	
20		HM350-1	1024	U.S.A.	
21		HM350-1	1025	U.S.A.	
22		HM350-1	1026	U.S.A.	
23		HM350-1	1027	U.S.A.	
24		HM350-1	1028	U.S.A.	
25		HM350-1	1029	U.S.A.	
26		HM350-1	1030	U.S.A.	
27		HM350-1	1031	U.S.A.	
28		HM350-1	1032	U.S.A.	
29		HM350-1	1033	U.S.A.	
30		HM350-1	1034	U.S.A.	
31		HM350-1	1035	U.S.A.	
32		HM350-1	1036	U.S.A.	
33		HM350-1	1037	U.S.A.	
34		HM350-1	1038	U.S.A.	
35		Belgium	HM350-1	1039	Belgium
36	(2 vehicles)	HM350-1	1040	Belgium	
37	Russia	HM350-1	1042	C.I.S.	

4. Details of the modification

The following modification by welding is to be carried out for reinforcement of the frame.

2. Adding the welding beads for reinforcement of the suspension bracket (Refer to Section 6-2.)

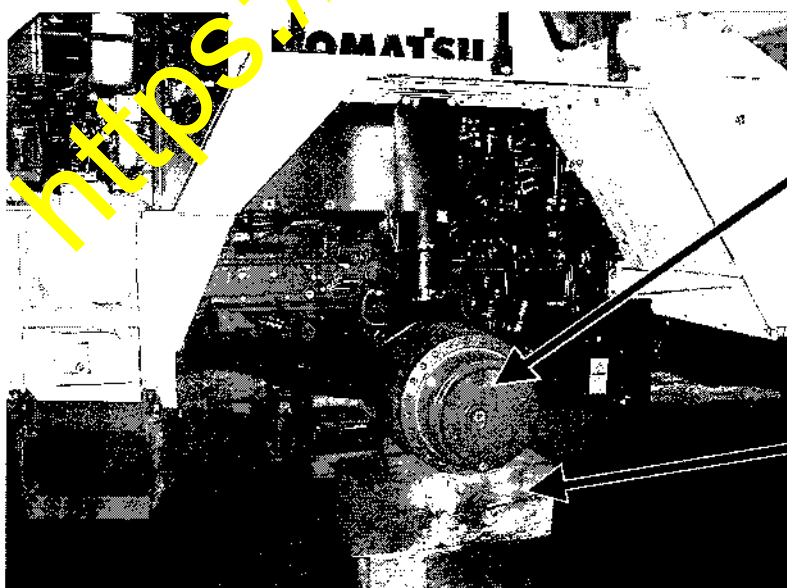
1. Reinforcement of the fuel tank bracket (Refer to Section 6-1.)



The welding rod to be used
Low oxygen type welding rod for high tensile steel application (f₁ 490 KN/mm² grade)

5. Preparations before starting the modification work

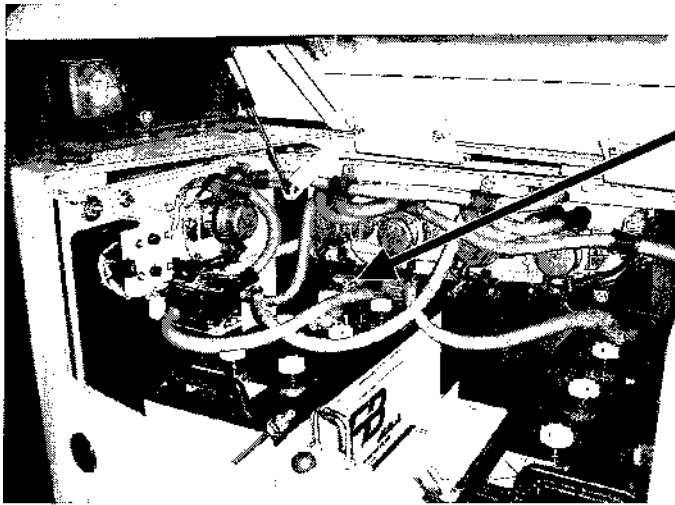
- 1) Wash the modifying sections to remove mud and sand sufficiently.
- 2) Park the vehicle on a flat place and stop the engine. Apply chocks to the rear wheels and remove the front wheels.



Remove both of the LH side and RH side the front wheel tires.

Insert cross ties underneath the rear axle.

- 3) For protection of the electronic equipment and devices, disconnect the battery cable from the (+) terminal of the battery.



Disconnect the battery cable from the (+) terminal of the battery.

- 4) Remove the mud guard from the inside of the fender and install a protection material.



An example of protection material.

Remove the mud guard.
(From both of the LH and RH sides)

56B-54-12732 (2) SEAT
56B-54-12452 (2) SEAT
01435-01025 (14) BOLT
417-43-16210 (14) WASHER

6. Modification procedure

6-1) Reinforcement of the fuel tank bracket

Weld 3 sheets of reinforcement plates to reinforce the fuel tank.

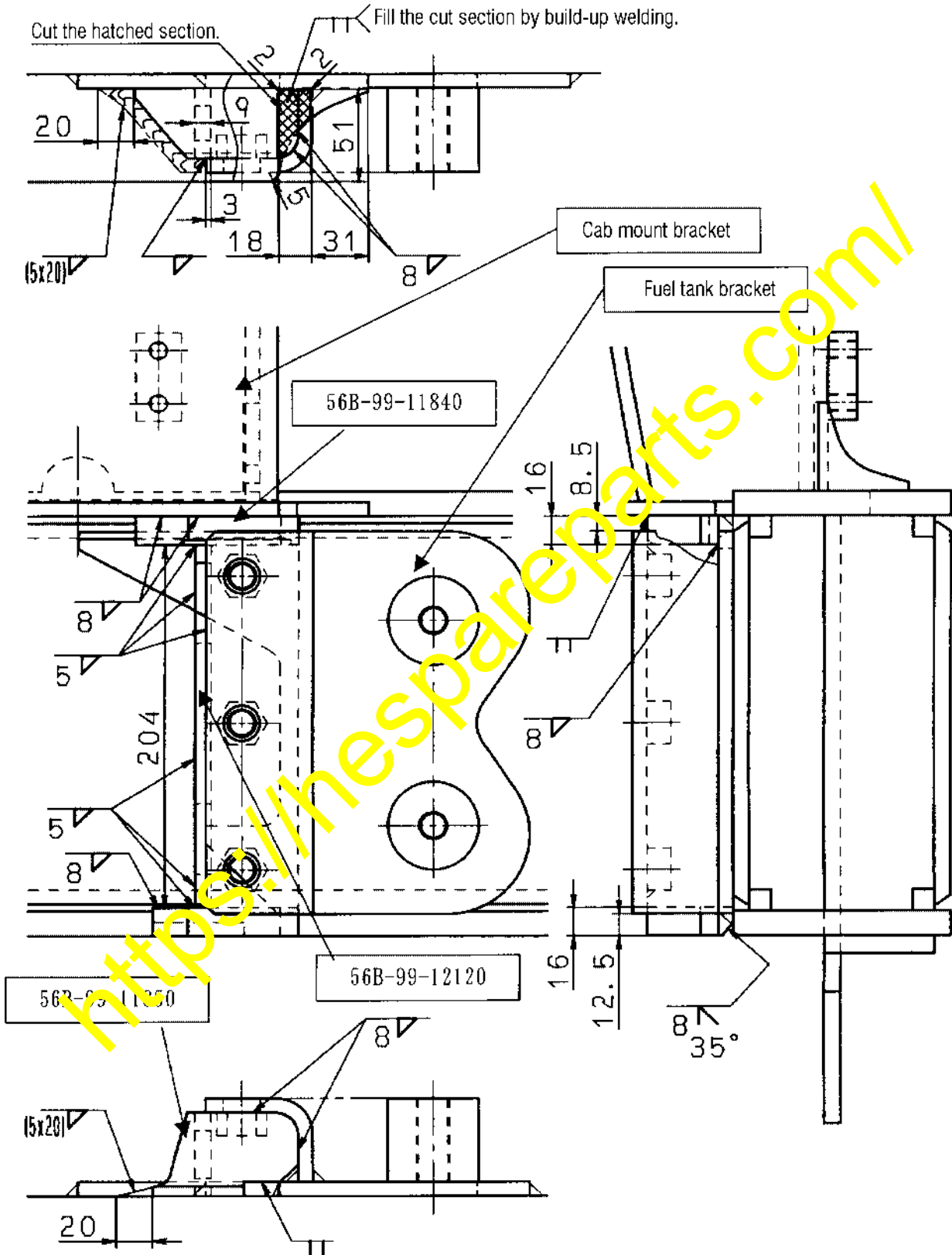


Current status



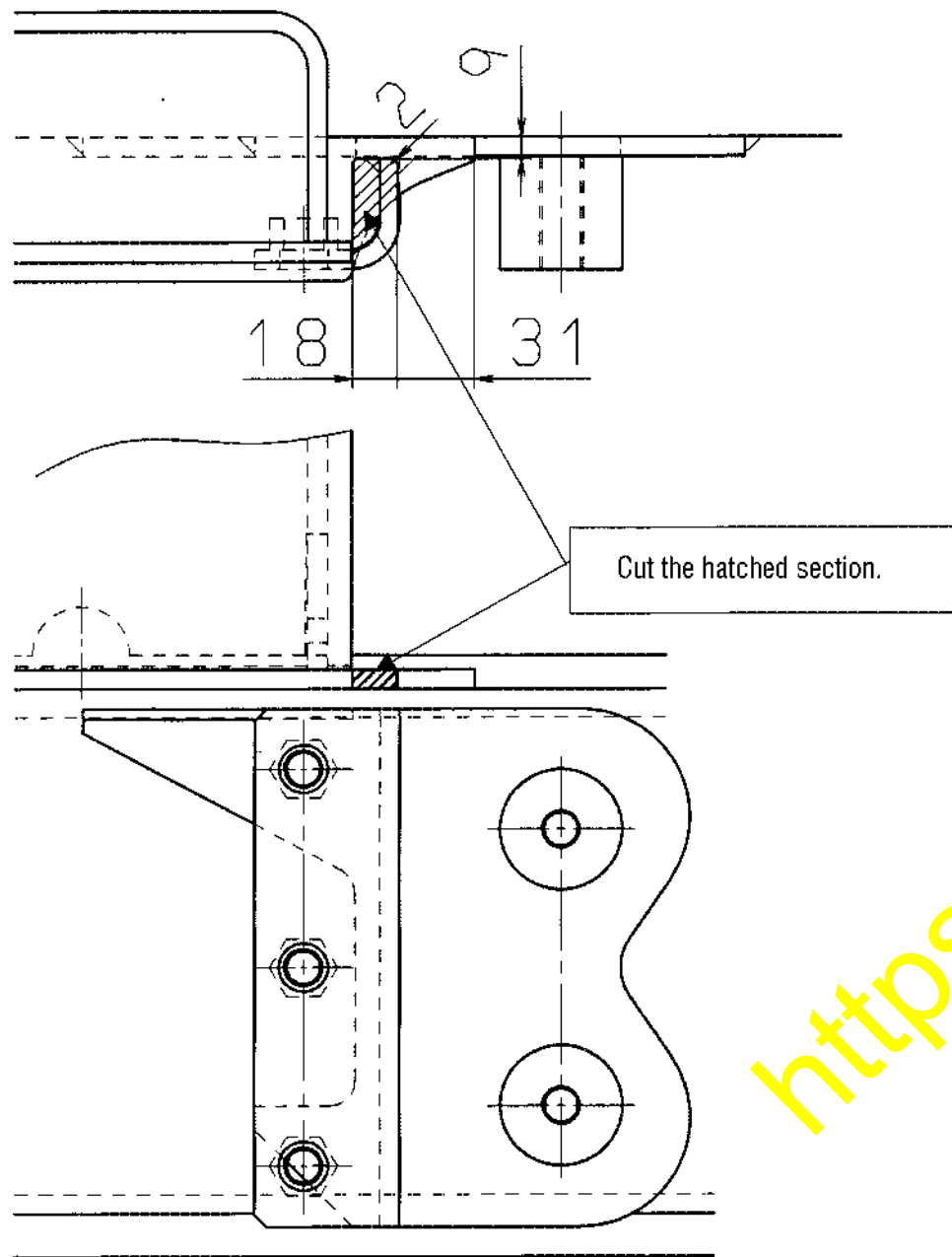
After the reinforcement

Reinforcement procedure drawing for the fuel tank bracket

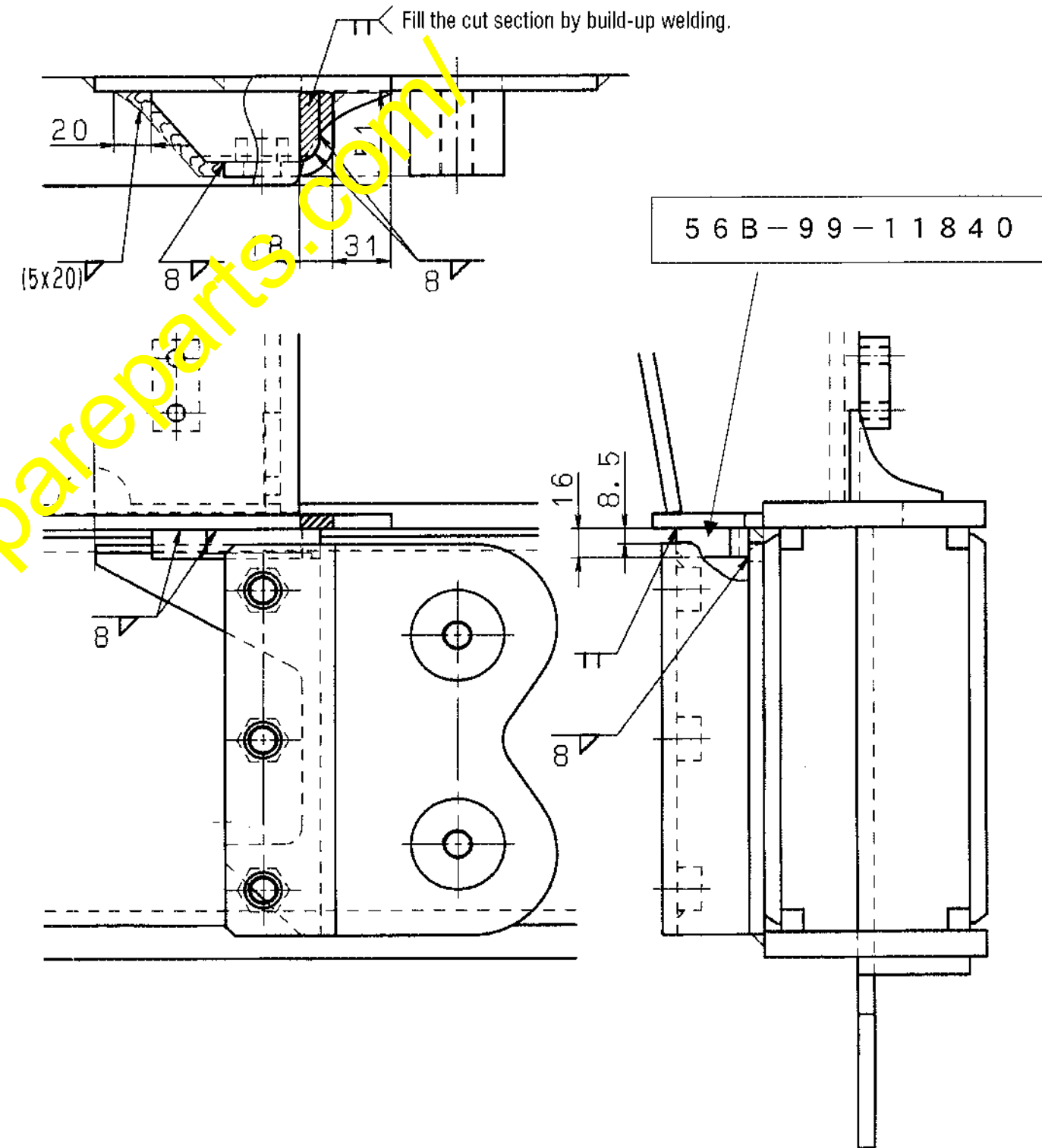


Details of the reinforcement procedure for the fuel tank bracket

- 1) Cutting the lower plate of the cab mount bracket
Cut the hatched section indicated in the drawing below.



- 2) Welding the plate 56B-99-11840
Weld the plate (56B-99-11840) between the fuel tank bracket and the cab mount bracket.

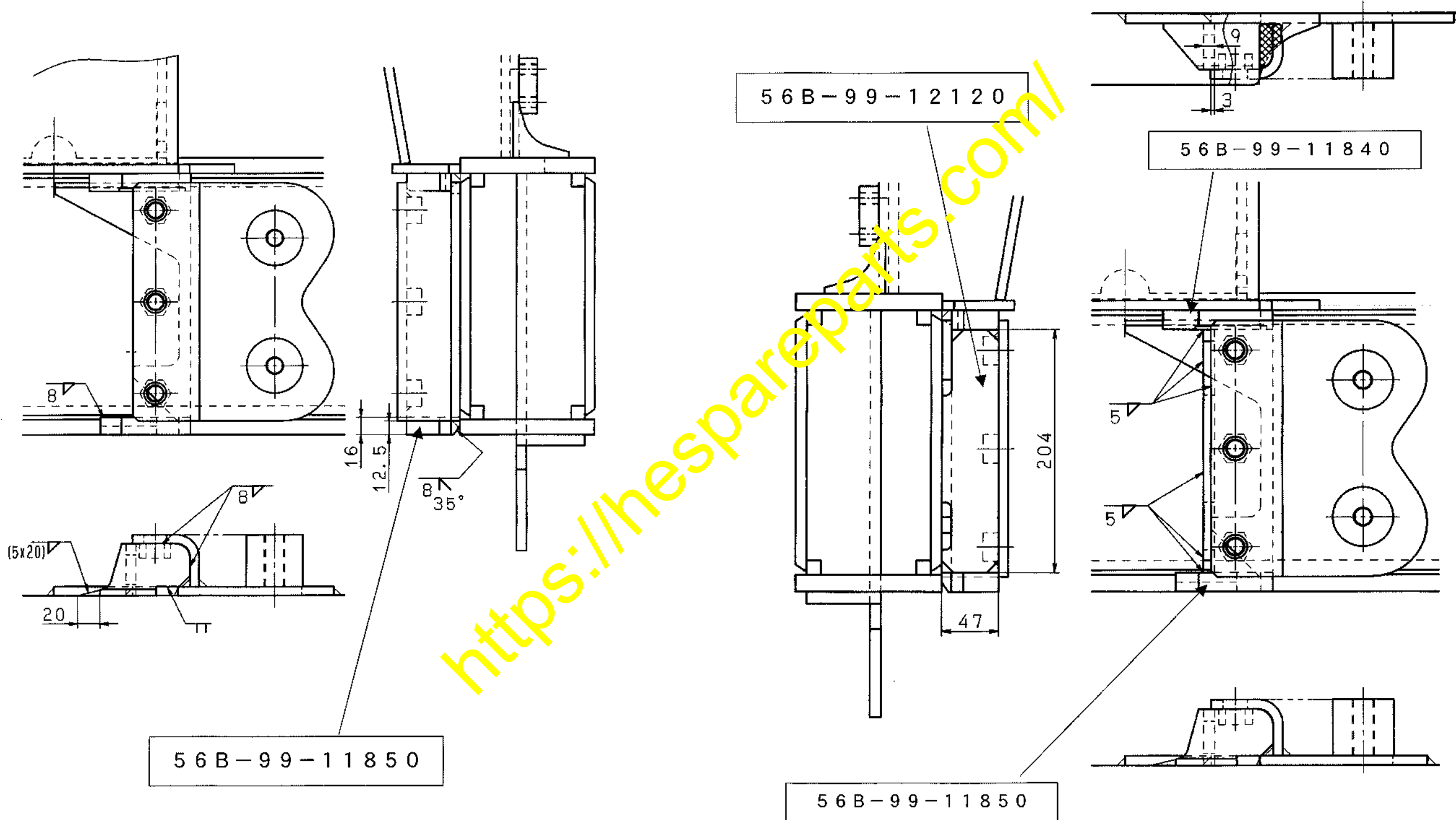


3) Welding the plate 56B-99-11850

Weld the plate (56B-99-11850) to the lower side of the fuel tank bracket matching to the lower surface of the side member.

4) Welding the plate 56B-99-12120

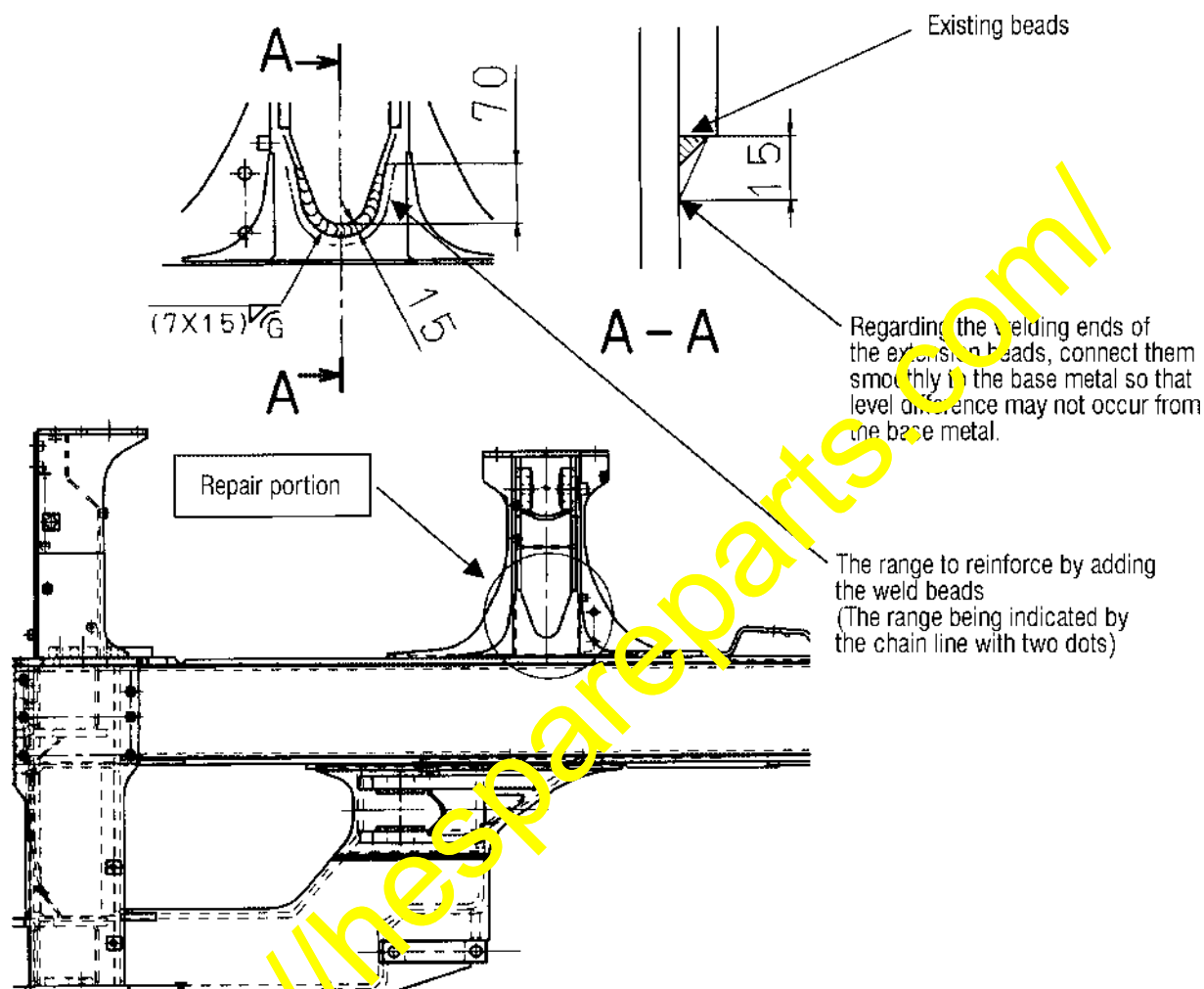
Weld the plate (56B-99-12120) between the plates (56B-99-11840 and 56B-99-11850) which have been welded as per the above Sections 2) and 3).



6-2) Adding the welding beads for reinforcement of the suspension bracket

Make build-up welding over the current 7 mm fillet welding beads to change to unequal leg length of 7×15 mm to ease the stress concentration.

(Make the above build-up welding on both of the LH and RH sides.)



7. Restoration of the vehicle body

After finishing the modification work for reinforcement, restore the vehicle body to the original state.

- 1) Install the mud guard to its original position in the inside of the fender.
- 2) Install the front wheels.
- 3) Check if any unusual condition, like oil leakage, exists on the vehicle body or not.