

GP/GLP/GDP80VX, GP/GLP/GDP90VX, GP/GLP/GDP100VX, GP/GLP/ GDP110VX, GP/GLP/GDP120VX (J813) SERVICE MANUAL CONTENTS

SECTION	PART NUMBER	YRM NUMBER	REV DATE
FRAME.....	524262274	0100 YRM 1243	05/14
OPERATOR'S CAB.....	524306203	0100 YRM 1290	04/14
GM 4.3L V-6 ENGINES.....	524265337	0600 YRM 1251	05/14
KUBOTA ENGINE REPAIR.....	550048607	0600 YRM 1557	03/13
KUBOTA DIESEL 3.6L ENGINE.....	550055279	0600 YRM 1579	01/14
COOLING SYSTEM.....	524223757	0700 YRM 1123	03/13
LPG FUEL SYSTEM GM 4.3L ENGINE WITH PSI.....	550043871	0900 YRM 1556	04/14
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DIAGRAMS AND SCHEMATICS.....	550096331	8000 YRM 1689	04/14
DIAGNOSTIC TROUBLESHOOTING MANUAL.....	524221866	9000 YRM 1112	12/14

9000 YRM 1112 ON CD

PART NO. 550069027 (12/14)

SAFETY PRECAUTIONS

MAINTENANCE AND REPAIR

- The Service Manuals are updated on a regular basis, but may not reflect recent design changes to the product. Updated technical service information may be available from your local authorized Yale® dealer. Service Manuals provide general guidelines for maintenance and service and are intended for use by trained and experienced technicians. Failure to properly maintain equipment or to follow instructions contained in the Service Manual could result in damage to the products, personal injury, property damage or death.
- When lifting parts or assemblies, make sure all slings, chains, or cables are correctly fastened, and that the load being lifted is balanced. Make sure the crane, cables, and chains have the capacity to support the weight of the load.
- Do not lift heavy parts by hand, use a lifting mechanism.
- Wear safety glasses.
- DISCONNECT THE BATTERY CONNECTOR before doing any maintenance or repair on electric lift trucks. Disconnect the battery ground cable on internal combustion lift trucks.
- Always use correct blocks to prevent the unit from rolling or falling. See HOW TO PUT THE LIFT TRUCK ON BLOCKS in the **Operating Manual** or the **Periodic Maintenance** section.
- Keep the unit clean and the working area clean and orderly.
- Use the correct tools for the job.
- Keep the tools clean and in good condition.
- Always use **YALE APPROVED** parts when making repairs. Replacement parts must meet or exceed the specifications of the original equipment manufacturer.
- Make sure all nuts, bolts, snap rings, and other fastening devices are removed before using force to remove parts.
- Always fasten a DO NOT OPERATE tag to the controls of the unit when making repairs, or if the unit needs repairs.
- Be sure to follow the **WARNING** and **CAUTION** notes in the instructions.
- Gasoline, Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), and Diesel fuel are flammable. Be sure to follow the necessary safety precautions when handling these fuels and when working on these fuel systems.
- Batteries generate flammable gas when they are being charged. Keep fire and sparks away from the area. Make sure the area is well ventilated.

NOTE: The following symbols and words indicate safety information in this manual:



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury and property damage.

On the lift truck, the WARNING symbol and word are on orange background. The CAUTION symbol and word are on yellow background.

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This section is for the following models:

GLC40, 45, 55VX; GLC55SVX (GC/GLC080, 100, 120VX; GC/GLC080,
100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) [E818, F818];
GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX
(GP/GLP/GDP080, 090, 100, 110, 120VX) [F813, G813, H813, J813]

General



WARNING

The lift truck must be put on blocks for some types of maintenance and repairs. The removal of the following assemblies will cause large changes in the center of gravity: mast, drive axle, engine and transmission, and counterweight. When the lift truck is put on blocks, put additional blocks in the following positions to maintain stability:

- Before removing the mast and drive axle, put blocks under the counterweight so the lift truck cannot fall backward.
- Before removing the counterweight, put blocks under the mast assembly so the lift truck cannot fall forward.

The surface must be solid, even, and level when the lift truck is put on blocks. Make sure any blocks used to support the lift truck are solid, one-piece units. See the procedure How to Put Lift Truck on Blocks in the Operating Manual or the Periodic Maintenance section for your lift truck.

If additional engine repairs are necessary for lift trucks covered in this manual see:

- **GM 4.3L V-6 Engines** 0600YRM1251
- **Kubota Diesel 3.8L Engines** 0600YRM1557
- **Kubota Diesel 3.6L Engine** 0600YRM1579

If additional transmission repairs are necessary for lift trucks covered in this manual see:

- **Powershift Transmission** 1300YRM1129
- **Powershift Transmission** 1300YRM1529
- **One and Two Speed Transmissions** 1300YRM1569

This section contains the description of the frame (see Figure 1 or Figure 2) and connected parts. Procedures for removing and installing the counterweight, hood, overhead guard, engine and transmission, and exhaust system are found in this section. Checks for the operator restraint system and procedures for the repair of tanks and installation of safety labels are also included.

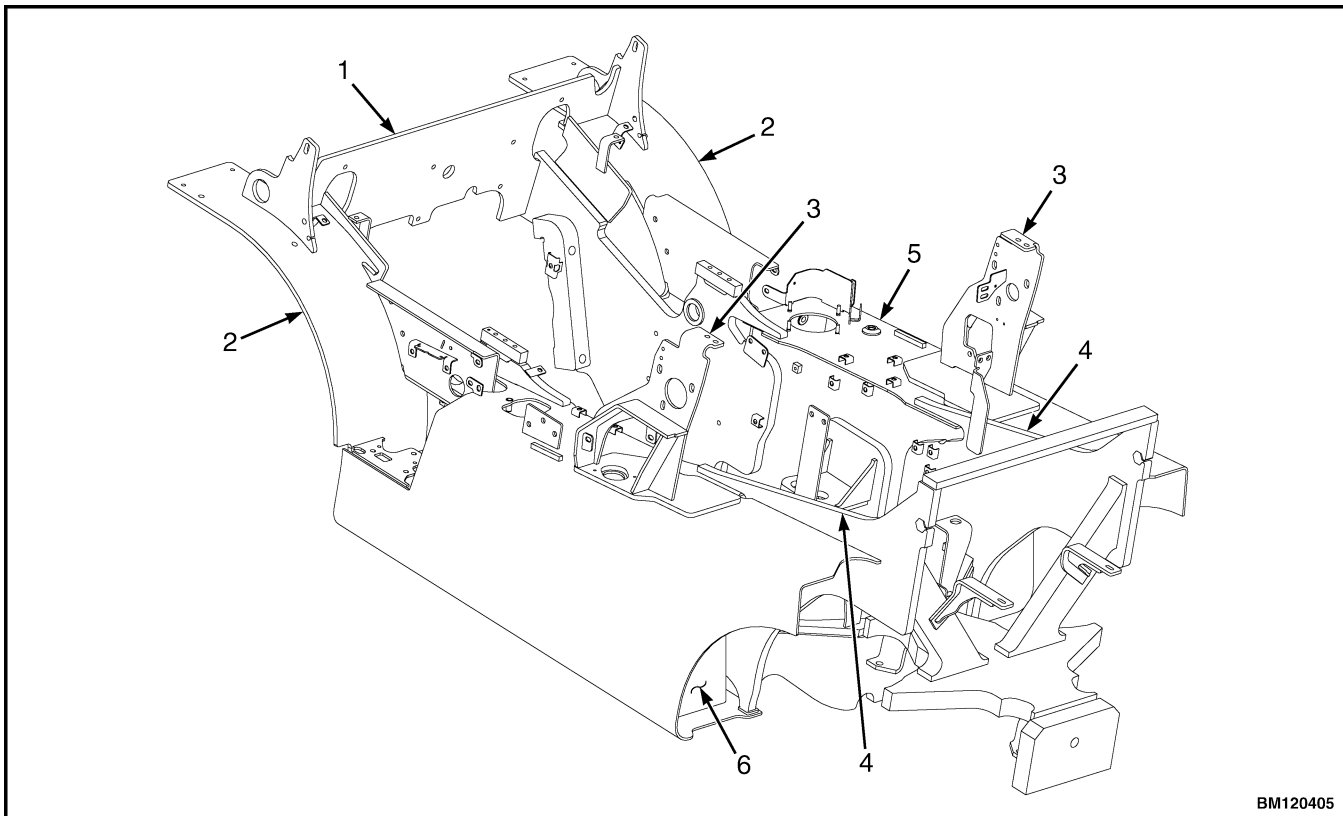
Description

The frame is one weldment and includes the hydraulic tank and fuel tank for gasoline or diesel fuel. See Figure 1 or Figure 2.

There is a counterweight for each capacity of lift truck. The counterweights are similar in appearance, but are different weights. **See Table 2.**

The muffler is fastened to the frame inside the counterweight.

The overhead guard, cowl, and hood are installed on the frame. The hood is connected to the frame with hinges. Two gas-controlled springs provide assistance when raising the hood and hold the hood in the open position. The floor plate and side covers can be removed for access to the engine, transmission, and other components.

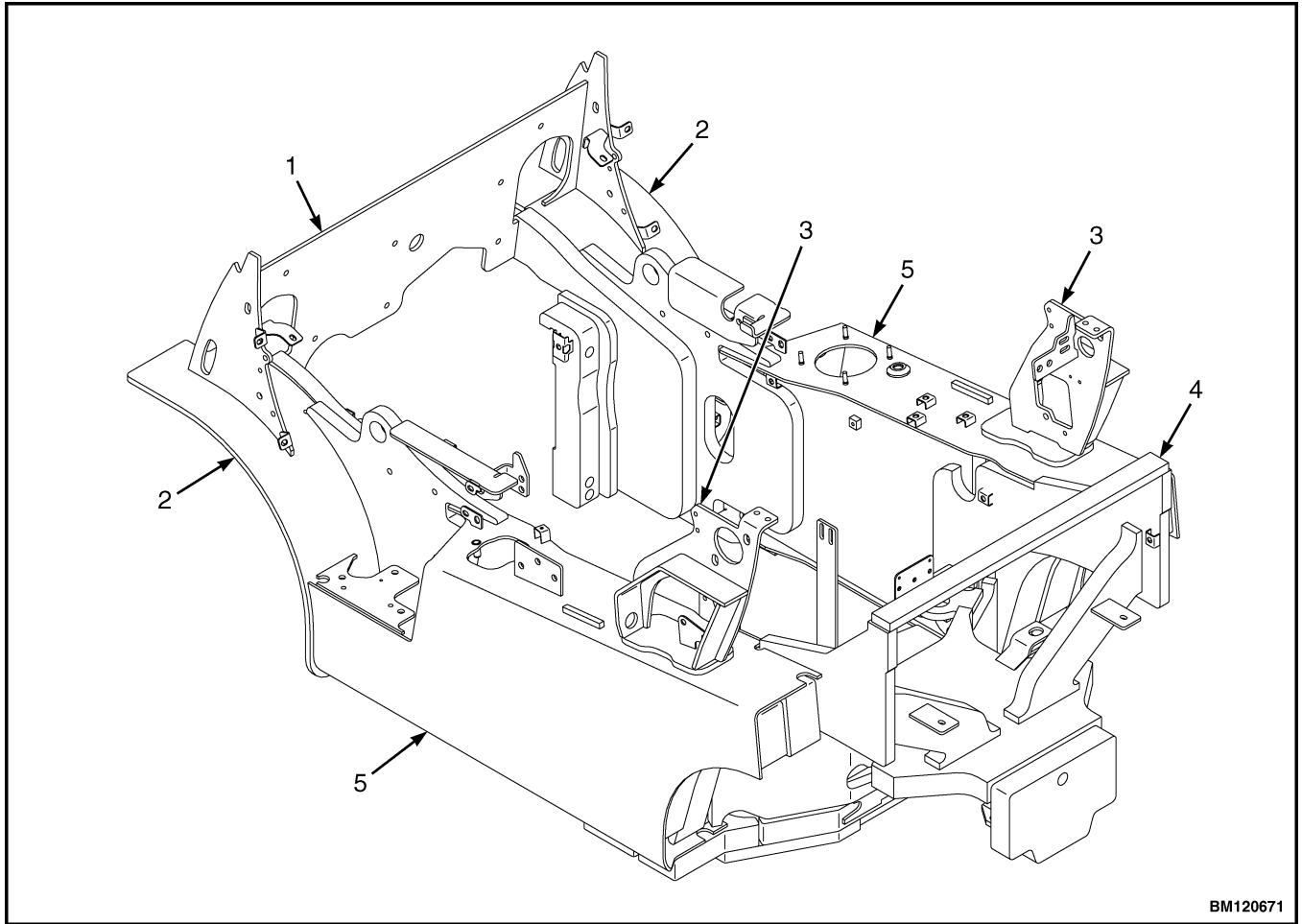


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1. COWL PLATE
2. FENDERS
3. HOOD MOUNTS

4. COUNTERWEIGHT MOUNTS
5. HYDRAULIC TANK
6. FUEL TANK (GAS OR DIESEL)

Figure 1. Frame for Lift Trucks with Single Hydraulic Tank



- 1. COWL PLATE
- 2. FENDERS
- 3. HOOD MOUNTS

- 4. COUNTERWEIGHT MOUNTS
- 5. HYDRAULIC TANKS

Figure 2. Frame for Lift Trucks with Dual Hydraulic Tanks

Hood, Seat, and Side Covers Replacement

REMOVE

1. Slide seat to the closest position to steering column.
2. Fully tilt steering column forward.
3. If your truck is equipped with an LPG tank, swing tank off to the side.
4. Raise latch on the left, front corner of hood to unlatch and lift up hood. See Figure 3.
5. Remove floor mat and floor plate. See Figure 4.
6. Remove two capscrews holding left and right rear side covers to the frame. Remove rear side covers from frame. See Figure 4.
7. Remove two capscrews holding left and right fender covers to front overhead guard leg. Remove covers. See Figure 4.
8. Remove four capscrews holding left and right front side covers to frame. Remove covers.
9. Fully lower the steering column.
10. Remove upper steering column cover by pulling up on upper steering column cover to release latches (one on either side), and pulling cover away from steering column. See Figure 5.
11. Remove five fasteners (see Figure 5) securing dash to the top of cowl. Remove four clips, located underneath dash, that attach dash to the kick panel. Lift to remove dash.
12. Lift kick panel to remove it from truck. See Figure 4.
13. Remove three capscrews holding the seal plate. Remove seal plate. See Figure 6.
14. Disconnect seat wire harness connector. See Figure 3.



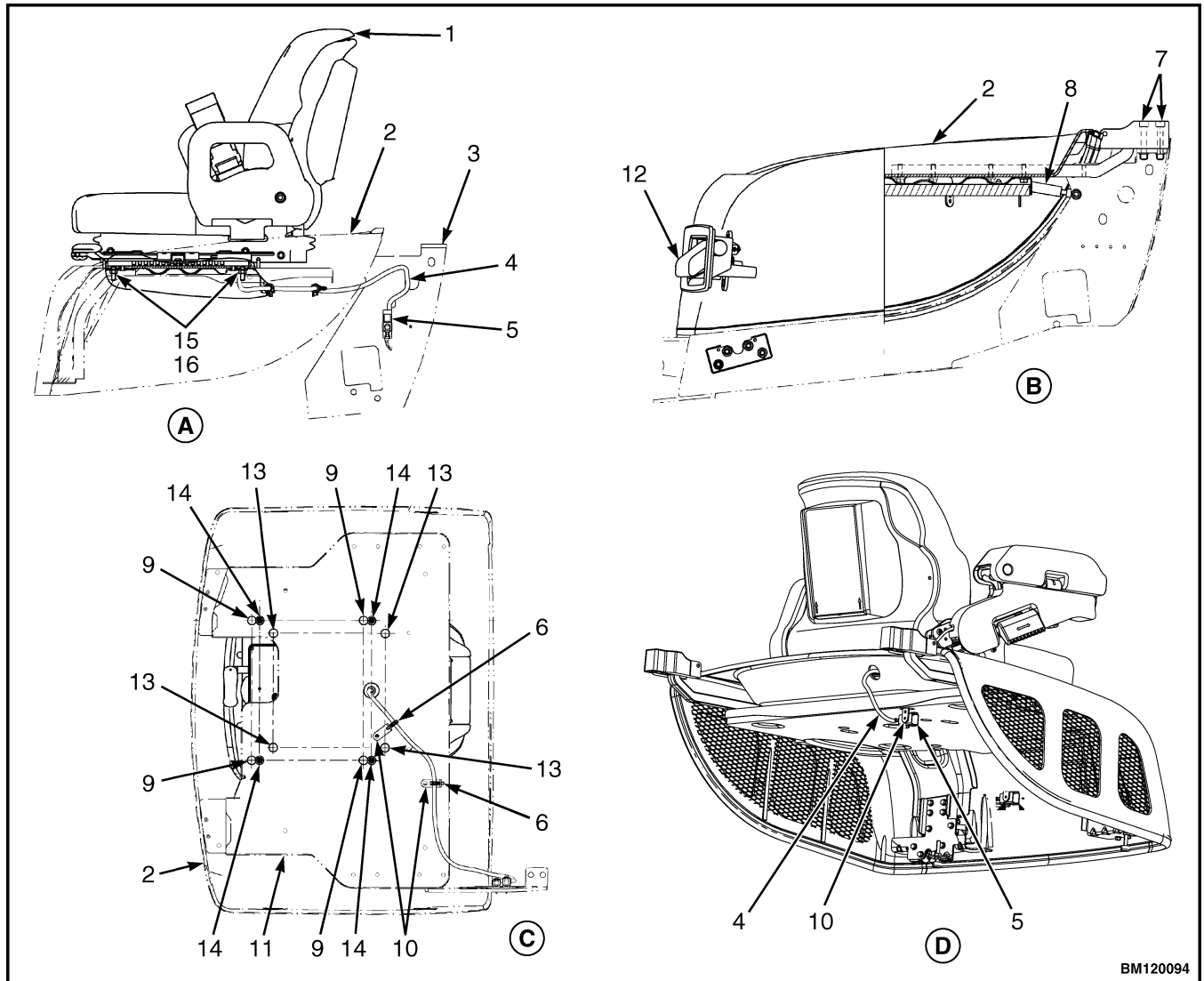
CAUTION

When removing the seat from the hood, DO NOT use an impact wrench to remove the capscrews. Damage can be caused to the threads on the screws and in the holes.

15. If seat is to be removed, and truck is equipped with a non-swivel seat, remove seat wire harness from seat wire harness brackets that are attached to the underside of hood. Remove the cable clips from the seat wire harness. If truck is equipped with a swivel seat, remove seat wire harness from seat wire harness bracket attached to underside of hood and behind the seat. See Figure 3.
16. Remove four capscrews and washers holding seat to the hood. Lift seat off the hood. Pull seat wire harness through hood. See Figure 3.
17. Remove capscrews and washers at top of the gas springs. Remove gas springs from hood.
18. Remove hinge screws, located in the rear of the hood.
19. Lift hood from the truck. See Figure 3.

INSTALL

1. Place hood onto the lift truck frame.
2. Install hinge screws, located in the rear of the hood, and tighten to 38 N•m (28 lbf ft). See Figure 3.
3. Align top holes in the gas springs with holes in hood. There are two sets of holes used to install the gas springs to hood, based on the type of seat installed on lift truck. One set is for installing the cylinder end of the gas springs and the other set is for attaching the rod end of the gas springs. Install capscrews and washers to attach gas springs to the hood. Refer to Figure 7 and Table 1 for correct holes used to connect the rod end of the cylinder, depending on the type of seat installed on the lift truck. Tighten capscrews to 19.2 N•m (170 lbf in).



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NOTE: SWIVEL SEAT AND VENTED HOOD ARE OPTIONAL FEATURES.

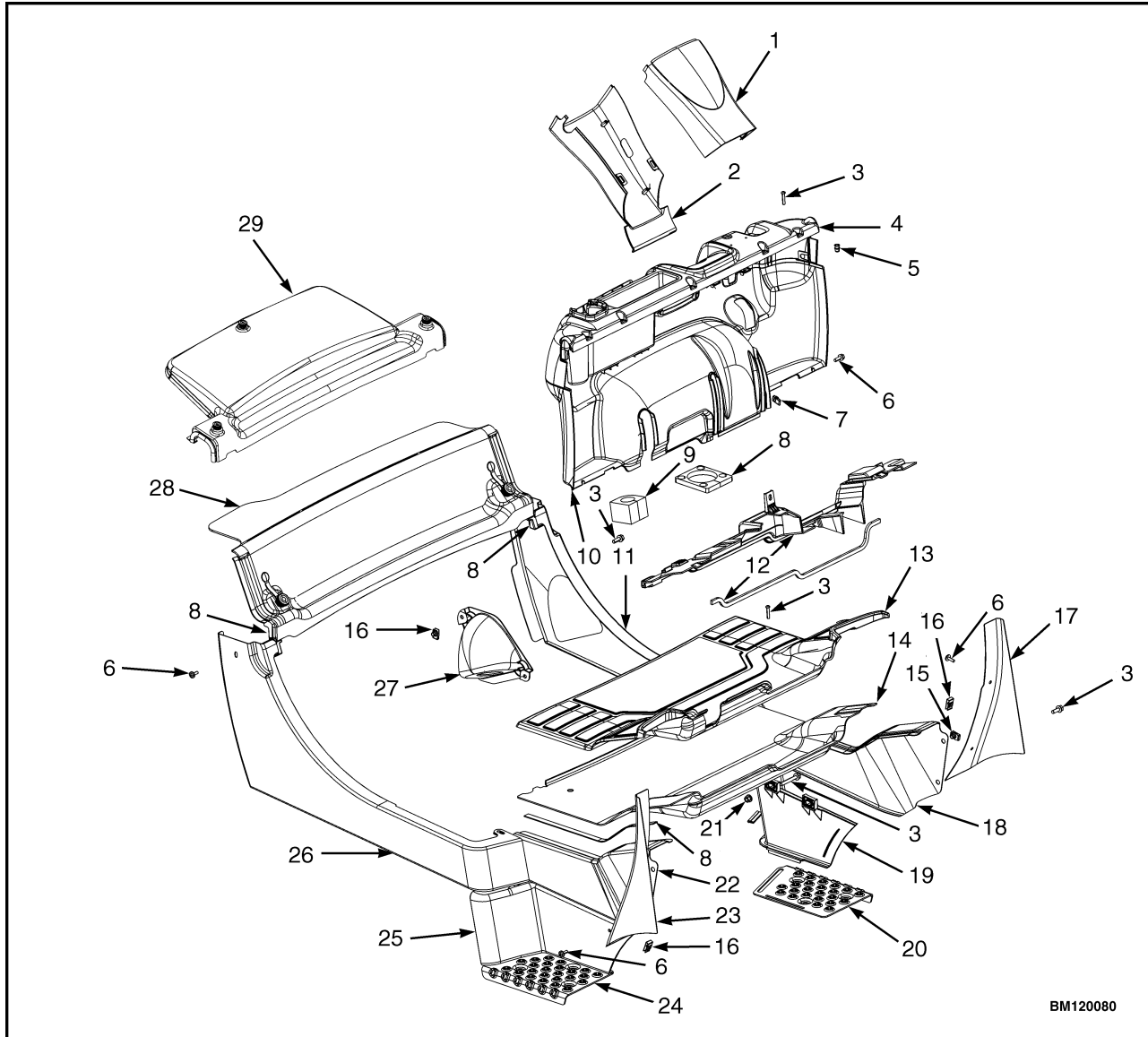
A. SIDE VIEW OF HOOD AND SEAT
B. SIDE VIEW OF HOOD

C. BOTTOM VIEW OF HOOD
D. SIDE VIEW OF VENTED HOOD WITH SWIVEL SEAT

- 1. SEAT
- 2. HOOD
- 3. FRAME
- 4. SEAT WIRE HARNESS
- 5. SEAT WIRE HARNESS CONNECTOR
- 6. CABLE CLIPS
- 7. HINGE SCREWS
- 8. GAS SPRING
- 9. ATTACHMENT HOLES ATTACHING HOOD TO SEAT (SEMI-SUSPENSION)

- 10. SEAT WIRE HARNESS BRACKETS
- 11. SEAT LINER
- 12. HOOD LATCH
- 13. ATTACHMENT HOLES ATTACHING HOOD TO SEAT (NON-SUSPENSION)
- 14. ATTACHMENT HOLES ATTACHING HOOD TO SEAT (FULL SUSPENSION)
- 15. SPACER
- 16. FLANGE NUT

Figure 3. Hood and Seat Arrangement



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- | | |
|---|---|
| <ol style="list-style-type: none"> 1. UPPER STEERING COLUMN COVER 2. LOWER STEERING COLUMN COVER 3. CAPSCREW 4. DASH ASSEMBLY 5. INSERT 6. SCREW 7. CLIP 8. SEAL 9. GROMMET 10. KICK PANEL 11. LEFT REAR SIDE COVER 12. SEAL PLATE ASSEMBLY 13. FLOOR MAT 14. FLOOR PLATE 15. CLIP NUT 16. FOLDOVER NUT 17. LEFT FENDER COVER 18. LEFT FRONT SIDE COVER | <ol style="list-style-type: none"> 19. LEFT PANEL 20. LEFT STEP PLATE 21. LOCK NUT 22. RIGHT FRONT SIDE COVER 23. RIGHT FENDER COVER 24. RIGHT STEP PLATE 25. RIGHT PANEL 26. RIGHT REAR SIDE COVER 27. SPLASH SHIELD 28. RADIATOR COVER GLC40, 45, 55VX;
GLC55SVX; (GC/GLC080, 100, 120VX; GC/
GLC080, 100VXBCS; GC/GLC120SVX; GC/
GLC120VXPRS) (E818, F818) 29. RADIATOR COVER (GLP/GDP40VX5/VX6; GLP/
GDP45SVX5, GLP/GDP45VX6; GLP/
GDP50-55VX (GP/GLP/GDP080, 090, 100, 110,
120VX) (F813, G813, H813, J813) |
|---|---|

Figure 4. Side Covers, Floor Plate, and Cowl Components

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