



Model 4.5CKM-RV Exhaust Kits PA-278321 and PA-278413 (Generator Mounted Below Floor - Flanged Exhaust)

This exhaust kit is designed for installation on 4.5CKM gensets (with flanged exhaust outlets) mounted below the RV floor. The kit includes a muffler, exhaust manifold, heat baffle and mounting hardware. Be sure to select the kit with the correct muffler outlet for the installation. Mufflers are designated left outlet or right outlet (as viewed from the generator service side). A tail pipe is not provided since tail pipe length varies with most installations. However, a tail pipe must be installed to direct engine exhaust away from the vehicle. Position all exhaust system components away from oil drain plug and mounting tray drain opening. Observe all safety precautions listed in text during kit installation.

WARNING



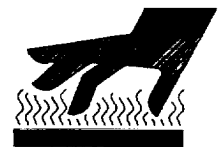
Carbon monoxide can cause death, severe nausea or fainting. Do not operate generator set with a faulty exhaust system or obstructed exhaust outlet. Never operate generator where exhaust gas could deflect into your vehicle or adjacent vehicles and buildings. Avoid breathing exhaust fumes when working on or near the generator set. The exhaust system must be installed as prescribed in equipment manual.

WARNING



Accidental starting can cause death or serious personal injury. Disconnect battery cables (remove negative lead first and reconnect it last) to disable generator set before working on any equipment connected to generator. The generator set can be started by remote start/stop switch unless this precaution is followed.

CAUTION



Hot parts can cause personal injury.

Do not touch hot engine parts. An engine gets hot while running and exhaust system components get extremely hot.

1. Remove existing exhaust system components (including exhaust manifold). The tail pipe may remain if it conforms with requirements outlined in the introduction and is compatible with exhaust kit components.
2. Position exhaust gaskets (278306) and new exhaust manifold (278311) over engine exhaust outlets as shown in Figure 1. Flared ends of manifold pipe should be tight against engine outlets. Secure exhaust manifold at exhaust outlets with four hex socket head screws (X-55-6). Remove engine enclosure bottom screw and replace with 1/4-20 screw (X-465-6) provided with kit. Attach manifold bracket to engine with replacement screw.

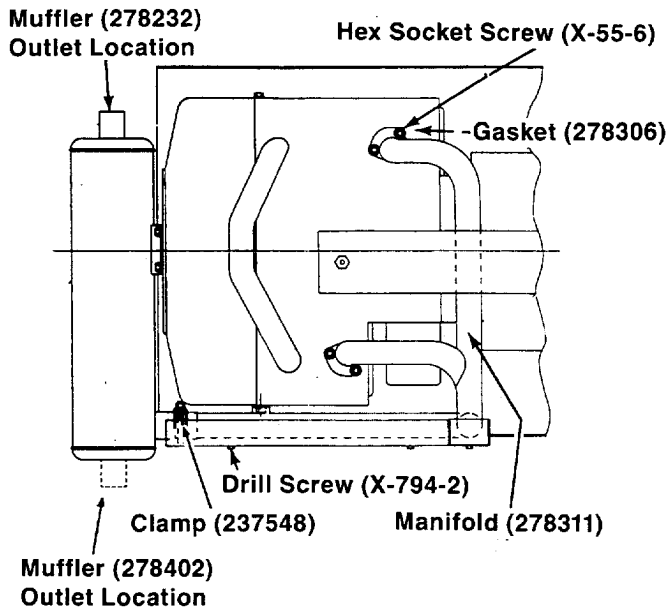


Figure 1. Exhaust Manifold Installation (Top View)

- Slide muffler (278232 or 278402) inlet over exhaust manifold outlet as shown in Figure 2. Align holes in muffler bracket with those near center of engine enclosure. Secure muffler outlet at manifold with clamp (237548) and at bracket with screws (X-125-33) and lock washers (X-21-1).

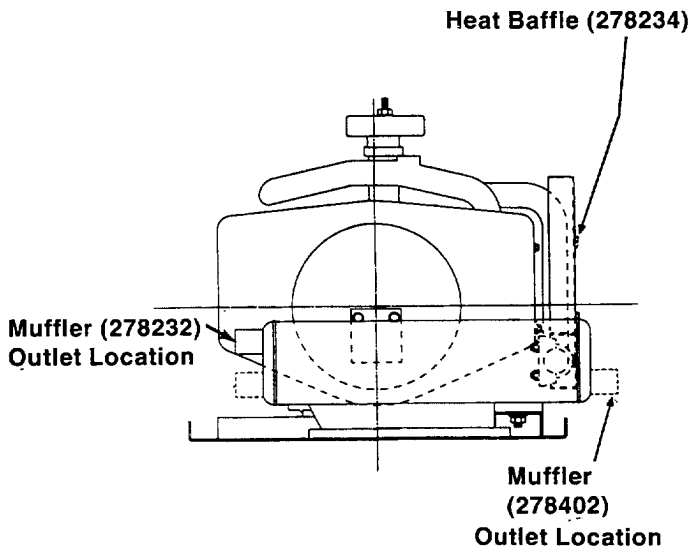


Figure 2. Muffler Position

NOTE

Muffler inlet must overlap exhaust manifold pipe a minimum of 1 in. (25 mm).

- Use four drill screws (X-794-2) to attach heat baffle (278234) to portion of exhaust manifold routed along back of generator. Long side of heat baffle should be installed parallel to mounting tray (Figure 3).

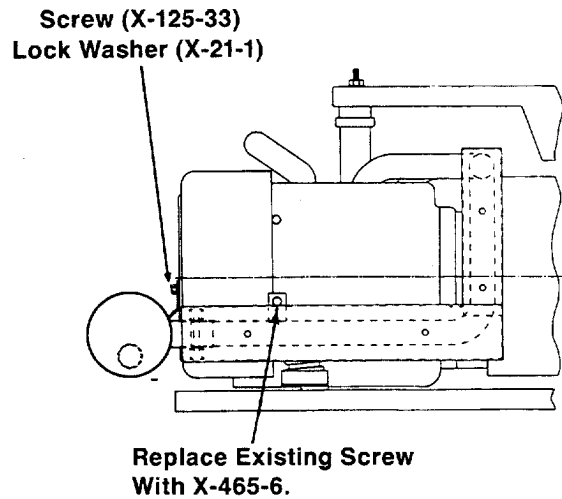


Figure 3. Heat Baffle Position

WARNING



Carbon monoxide can cause death, severe nausea or fainting. Install exhaust system tail pipe so discharged exhaust cannot be drawn into vehicle through doors, windows, air conditioners, etc. Do not use flexible tail piping since flexible piping may break and allow exhaust gas to enter the vehicle.

- Position tail pipe over muffler outlet and secure with pipe clamps (not included). A tail pipe must be installed to direct exhaust gases away from the vehicle. Use a tail pipe with gradual bends (less than 90°) to avoid excessive back pressure but under no conditions should flexible exhaust tubing be used.

NOTE

Tail pipe must overlap muffler outlet a minimum of 1 in. (25 mm).

PARTS LISTING

Description	Qty.	KITS	
		PA-278321	PA-278413
Screw, H.C. 5/16-18 x 3/8	2	X-125-33	X-125-33
Washer, lock 5/16	2	X-21-1	X-21-1
Screw, H. C. 1/4-20 x 1/2	1	X-465-6	X-465-6
Screw, hex socket head 3/8-16 x 3/4	4	X-55-6	X-55-6
Screw, drill	4	X-794-2	X-794-2
Clamp, muffler	1	237548	237548
Muffler	1	278232	278402
Baffle, heat	1	278234	278234
Gasket, exhaust	2	278306	278306
Manifold, exhaust	1	278311	278311