



**EXHAUST SYSTEM # MV00039
AMERICAN OUTLAW (2-1)**

Feel the Power of Freedom

Congratulations, you have acquired the finest aftermarket performance exhaust system available for your motorcycle. Your FREEDOM PERFORMANCE exhaust system was designed to perform fit and give the optimum sound and style at a very affordable price.

Please read and follow the installation instructions and certainly do not hesitate to call us for any technical questions at (310) 324-0415 or visit us at: www.freedomperform.com

PACKAGING LIST: MV00039-HW Underlined = pre-assembled

PART #	DESCRIPTION	QTY	PART #	DESCRIPTION	QTY
V180-F14	FRONT HEADER PIPE	1	HWB0007	5/16"-18X5/8" ZINC PLATED SERRATED FLANGE BOLT	2
V181-F14	REAR MUFFLER/HEADER ASSEMBLY	1	HWB0004	5/16"-24 X 5/8" 12 POINT SCREWS CHROME PLATED	6
V180-F3	FRONT HEAT SHIELD	1	HWB0051	<u>1/4"-20 X 1/2" BUTTON HEAD CAP SCEW ZINC PLATED</u>	6
V181-F3	REAR HEAT SHIELD UPPER SECTION	1	HWW0003	<u>1/4" SPLIT WASHER ZINC PLATED</u>	6
V182-F3	REAR HEAT SHIELD LOWER SECTION	1	HWC0002	WORM CLAMP # 24	8
V183-F3	FRONT SMALLER HEAT SHIELD	1	HWC0004	WORM CLAMP # 40	1
HS120-F3	MEGAPHONE MUFFLER HEAT SHIELD	1	HWC0005	WORM CLAMP # 56	1
A185ECA-F10	<u>SYSTEM END CAP</u>	1	HWC0010	BARREL CLAMP # 62	1
A145-LCB-F8	<u>SYSTEM BAFFLE</u>	1	A115-O2-F7	18MM O2 BUNG PLUGS	2
MBK-V130-F4	MOUNTING BRACKET WIDE FRAME	1	MV00039-INS	INSTRUCTIONS MANUAL	1
MBK-V131-F4	MOUNTING BRACKET NARROW FRAME	1	MV00039-HW	HARDWARE BOX	1
MBK-M115-F7	BACK PLATE BRACKET	1			

WARNING: When installing your new exhaust system always refer to owner's manual for torque specifications and follow safety precautions, make sure motorcycle is properly secure to prevent it from falling and that is not hot to prevent burning.



STOCK EXHAUST SYSTEM REMOVAL

1. When removing or installing accessories there is always a chance to scratch motorcycle components, use painters tape on areas prone to scratches during the installation such as frame, chrome or painted parts.
2. It is recommended to use some type of penetrating lubricant to all nuts and bolts to be removed for an easier removal.
3. Loosen all heat shield clips with a nut driver or flat screw driver.
4. Remove right side panel.
5. Loosen and remove the acorn nuts (4) holding the headers to the engine port using a 13mm socket or wrench and save for re-use with the new exhaust system.
6. Loosen the two bolts holding the right side riders peg assembly with an 8mm hex key wrench and remove them, this step is only to have more space to remove stock and install your new exhaust system. See (Fig 1.1) **NOTE: Be careful not to bend or damage the brake line, hold it to the frame with a plastic tie until the new system has been installed.**
7. Loosen band clamp holding the front header to the rest of the system as it will be removed last, apply penetrating oil to ease the removal.
8. If equipped, remove O2 sensor using a 22mm or 7/8" wrench. it may be easier to locate harness and disengage to remove sensors when the headers are fully apart from the motorcycle. mark which sensor is rear and front.
9. Using a 14mm socket, loosen and remove bolts holding the canister to the mounting bracket. (Fig 1.2)
10. Remove rear section from motorcycle by disengaging from the front header section and place it aside, some assistance may be required.
11. Remove the front header system and set it aside.
12. Remove stock mounting bracket, using a 14mm and 17mm socket or wrench, remove the two bolts holding mounting bracket to frame member and the large lock nut. Save bolts for re-use. (Fig. 1.3)
13. Replace lock nut back in place and tighten.
14. Remove screw holding oil cooler and move cooler just enough to have access for the removal and installation of your new system use a 10mm socket or wrench. (DO NOT DISCONNECT OIL COOLER HOSES) (Fig. 1.4)

Note: use good and safe practices when removing and installing your new exhaust system to prevent injuries that includes but is not limited to such as safety glasses and gloves. When installing make sure gloves are not abrasive or damage may occur like scratching parts. Always secure motorcycle before any work is done.

1. Remove exhaust system from protective packaging. Place them in a non-abrasive surface such as a blanket or carpet. By doing this you can avoid scratching the parts in the installation process. We recommend using painters tape to cover parts and accessories on areas where damage can occur during installation. **Note: mounting brackets are taped to the bottom of the box remove (ALL) packaging from box.**
2. Attach mounting bracket **MBK-V131-F4** (Kingpin/Highball/Vegas/8ball narrow frame) or **MBK-V130-F4** (Hammer/Jackpot wide frame) using a socket or wrench to motorcycle frame, use stock 8mm screws. **(Fig. 2.1) NOTE: If you no longer have the stock exhaust system and your motorcycle is equipped with another brand of exhaust its very likely that the bar from the frame that supports the mounting bracket has been cutoff, if this is the case you will need to purchase the stock exhaust bar from your local dealer in order to install our system. (Fig. 2.2)**
3. Install smallest heat shield **V183-F3** over from pipe **V180-F1** using #24 hose clamp in a way that the head of the screw is feasible to be tightened after aligning it.
4. Install front header **V180-F14** into engine exhaust port, now, secure flange with stock flange nuts and finger tighten both all the way. **(Fig. 2.3)**
5. Slide 1 Barrel clamp (# 62) in front of the slotted end of the rear header/muffler assembly **V181-F14** with the bolt facing upwards and towards transmission, now, engage assembly onto front header **V180-F14** align rear header to engine port and secure flange with stock flange nuts finger tighten all the way. **(Fig. 2.4)** If oil return hose is on the way, press clamp with plyers and rotate it away from the head pipes, adjust it as necessary. **(Fig. 2.5)**
6. Secure full assembly to mounting bracket by aligning the bracket welded on the muffler to the mounting bracket using two 5/16-18 flange serrated screws and one **MBK-M115-F7** back plate bracket. Insert the back plate bracket inside the bracket welded to the muffler making sure the nuts face towards the muffler. **(Fig. 2.6) DO NOT TIGHTEN AT THIS TIME YET.**
7. Models equipped with oxygen sensors Install oxygen sensor (from stock) apply a small amount of anti-seize compound to the threads of the O2 sensors and install it into the new headers. NOTE: Be careful not to get anti-seize on sensor tip, it may affect sensor functionality. models without O2 sensor plug bongs with supplied plugs. Use a 22mm or 7/8" to thighten sensors. **Note: If you find it easier to install sensors prior to installing headers do so.** Connect oxygen sensor harnes and make sure the cable is not touching pipes or damage will occur. **(Fig. 2.7)**
8. Tighten muffler to mounting bracket using a 1/2" wrench.
9. Tighten engine head port flange nut using a 12mm socket or wrench.
10. Install rear heat shield **V181-F3** over rear pipe using two # 24 hose clamps. This is the one closer to the rear engine port make sure clamps are in a way that the head of the screw is feasible to be tightened after aligning it. Use a 5/16" nut driver or flat screw driver.
11. Install front shield **V180-F3** over front pipe using three # 24 hose clamps.
12. Install rear lower heat shield **V182-F3** using two # 24 hose clamps.
13. Install muffler heat shield **HS120-F3** using two hose clamps, a # 40 narrow end and # 56 wide end align to your preference.
14. Align heat shields and tighten clamps using a 5/16" nut driver or flat screw driver. Make sure the back of rear lower shield and front shield are flash to each other, the lower rear shield can be adjusted to have the same gap as the front shield around the muffler.
15. Tighten barrel band clamp using a 5mm hex key wrench.
16. Place floorboard back in place and tighten it using an 8mm hex key wrench.
17. Move oil cooler back in place and tighten it using a 10mm socket or wrench.
18. Place side cover back in place.
19. Check for adequate clearance between all exhaust system components and motorcycle accessories prone to heat damage.
20. Clean exhaust system with some chrome cleaner and remove painters tape (if used during installation) before turning on engine. Failure to follow this procedure may result in damages to the chrome finish as oils burn out leaving permanent marks.

Note: Be sure to tighten all hardware before starting your engine. Retighten after the first 100 miles.

Re-mapping is strongly recommended by FREEDOM PERFORMANCE

There are accessories available for this exhaust system such as quiet baffles, contact us for more details.

Every attempt has been made to provide improved cornering Clearance. However, due to design and space boundaries on some motorcycle models, ground and cornering clearance may not be improved and in some cases may even be reduced.

WARNING!

FREEDOM PERFORMANCE DOES NOT WARRANTY ANY CHROME OR BLACK FINISH PRODUCTS AGAINST DISCOLORATION.

Note: use good and safe practices when removing and installing your new exhaust system to prevent injuries that includes but is not limited to such safety glasses and gloves. When installing make sure gloves are not abrasive or damage may occur like scratching parts. Always secure motorcycle before any work is done.



Fig 1.1 remove peg assembly

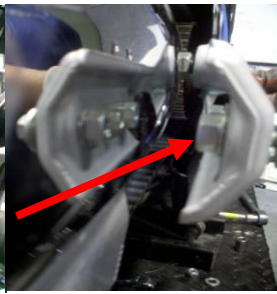


Fig 1.2 remove muffler



Fig 1.3 remove mounting bracket



Fig 1.4 remove mounting bracket screws



Fig 1.1 install mounting bracket (narrow frame shown)

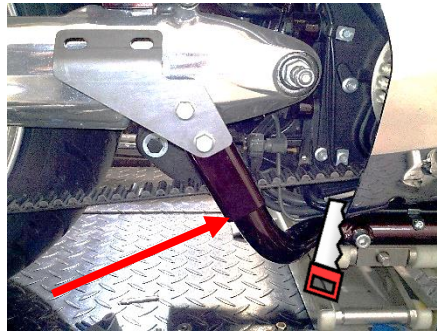


Fig 2.2 stock bar (may vary by model) sometimes this bar has been cutoff where the saw is shown



Fig 2.3 install front pipe with shield



Fig 2.4 install muffler/header assembly



Fig 2.5 rotate hose if necessary away from rear header



Fig 2.6 insert back plate bracket and secure it with two 5/16\"-18 flange screws flat side seats against bracket



Fig 2.7 install sensor and connect to harness

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