



TECH EXCHANGE

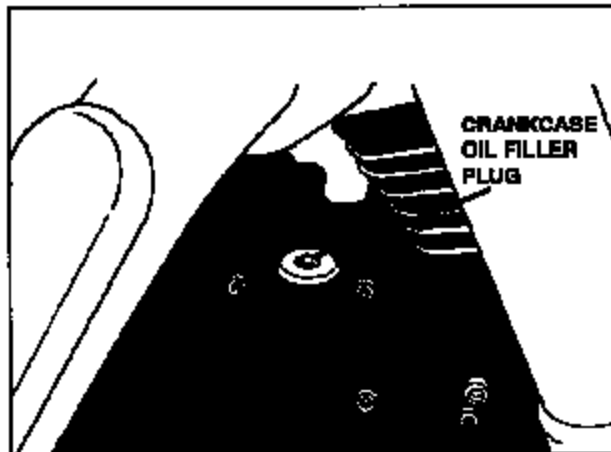
SUBJECTS: 1. Additional Labor Saving Tips for Recall Transmission Modifications - XV1600/1700

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Additional Labor Saving Tips for Recall Transmission Modifications - XV1600/XV1700

Here are some additional time saving tips to be followed when performing the transmission component replacement tips of Recalls M2003-011, M2004-001, and M2004-002 on Road Stars and Road Star Warriors:

1. Follow in the order listed the technical tips outlined in the above Recall bulletins, while incorporating the additional time saving tips described in this exchange.
2. There is no need to remove the ignition coils (XV1600 only).
 - Simply remove the spark plug caps from the spark plugs and secure the wires above the frame tube. This will save time needed to remove and replace the coils and correctly route the wires.
3. There is no need to fully disassemble the transfer case during transfer case removal.
 - Simply remove the outer chrome cover. This allows access to the middle drive gear nut.
 - Fold the lock washer tabs over and remove the nut.
 - Remove the transfer case assembly.
 - During re-installation, pour the specified quantity of gear oil into the transfer case directly through the middle gear access hole. This will save the time otherwise needed to remove the additional components, clean the gasket surfaces and add gear oil.
4. There is no need to add engine oil in multiple steps (e.g., add a portion of engine oil at a time to the oil reservoir, then start the engine and add more oil).
 - Simply add 3 quarts of oil directly into the engine, through the filler plug located on top of the crankcase directly behind the rear cylinder. Pour the remaining specified quantity of engine oil into the oil reservoir, then start the unit. This will save time needed to add and check the engine oil level multiple times.



If you have technical tips you think other dealers could use, let us know. You'll receive credit in the Tech Exchange for the ideas we use, and we'll send you an exclusive Yamaha Tech Exchange hat as our thanks.

Send your tips to: Yamaha Motor Corporation, U.S.A., Attn: Tech Exchange, P.O. Box 6555, Cypress, CA 90630

Technical BULLETIN

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XV1700P/PC (Road Star Warrior) Time Saving Transmission Repair Tips

i INTRODUCTION

Transfer Case Removal Tips

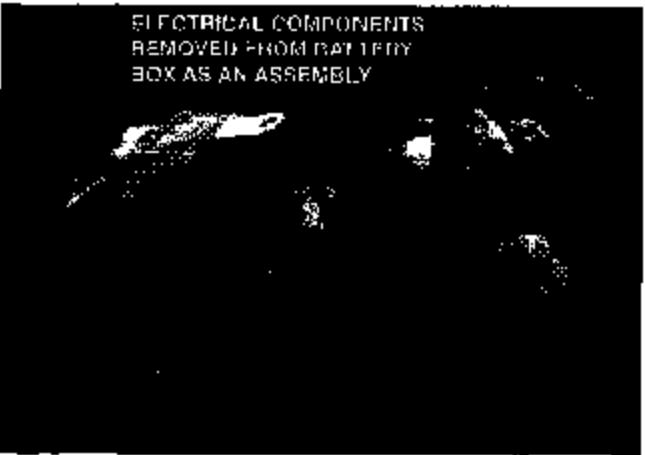
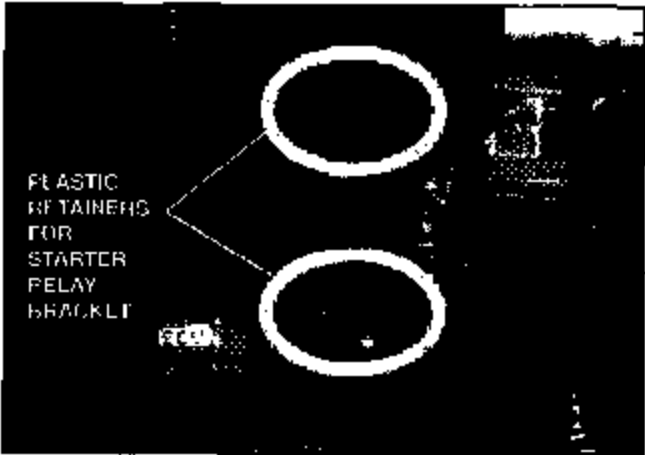
To remove the transfer case as an assembly when performing the recall described in Technical Bulletin M2004-002, you must first remove the battery box and lower ("sub") fuel tank. This is because there is a rubber heat shield on the back side of the transfer case that cannot be removed until the plastic retainer holding it to the frame is removed. The only way to reach this retainer is by removing the battery box and lower fuel tank.



Be sure to refill the transfer case with lubricant when the transmission modification procedure is finished. Verify oil level before reinstalling the muffler to prevent severe engine damage.

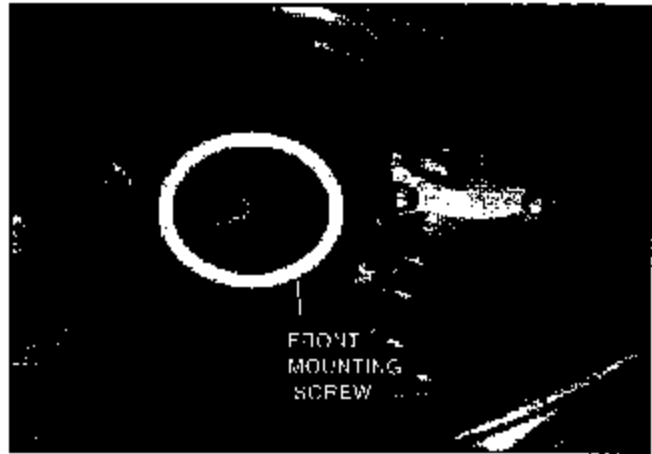
Battery Box Removal

1. Disconnect and remove the battery.
2. Remove the battery ground cable from the oil filler neck.
3. Pull the starter relay up and away from its bracket and remove the two plastic retainers that secure the starter relay bracket to the battery box (see adjacent top photo).
4. Remove the plastic tie that secures the main wire harness to the battery box.
5. Disconnect the wire connector for the taillight and remove all electrical components from the battery box as an assembly (see adjacent bottom photo).
6. Remove the two battery box mounting hex screws, then remove the battery box.



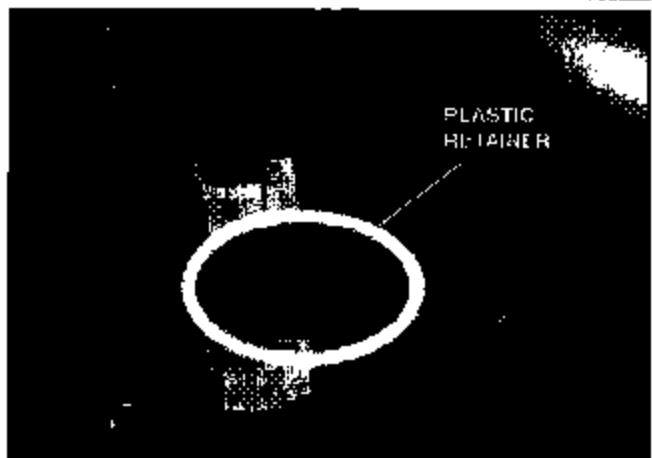
Lower ("Sub") Fuel Tank Removal

1. Remove the drive belt pulley cover, pulley, and rear housing.
2. Disconnect the hoses and wire connector from the lower fuel tank.
3. Remove the three mounting screws for the lower fuel tank (see the two adjacent photos), then remove the sub fuel tank.

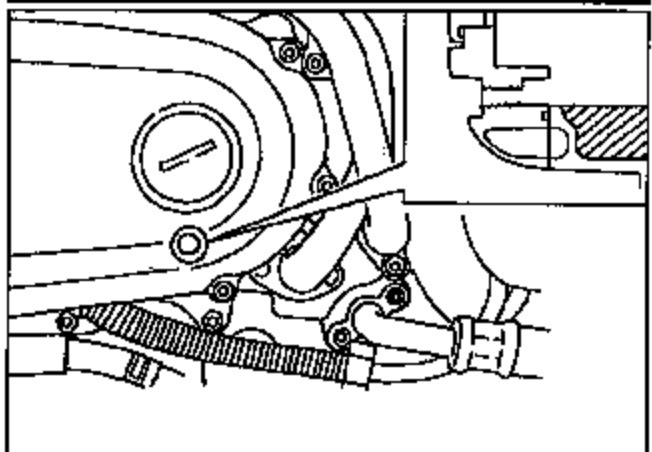


Rubber Heat Shield Retainer Removal

1. Remove the plastic retainer that attaches the rubber heat shield (on the back of the transfer case) to the bracket on the frame. The transfer case can now be removed following the procedure in the M2004-002 Recall Technical Bulletin.



NOTE: The transfer case has its own oil supply, which is independent from the engine oil supply. Be sure to refill the transfer case with 0.49L (0.52 US qt) of SAE80 API "GL-4" Hypoid gear oil, before installing the exhaust system. Double check the oil level to be sure it is full (see adjacent illustration).



Adjustable Engine Mount Tip

When removing or reinstalling the engine, remember the right side, lower front engine mount uses an adjustable collar (spacer bolt) inside the frame. This collar must be loosened prior to engine removal and retightened during engine installation.

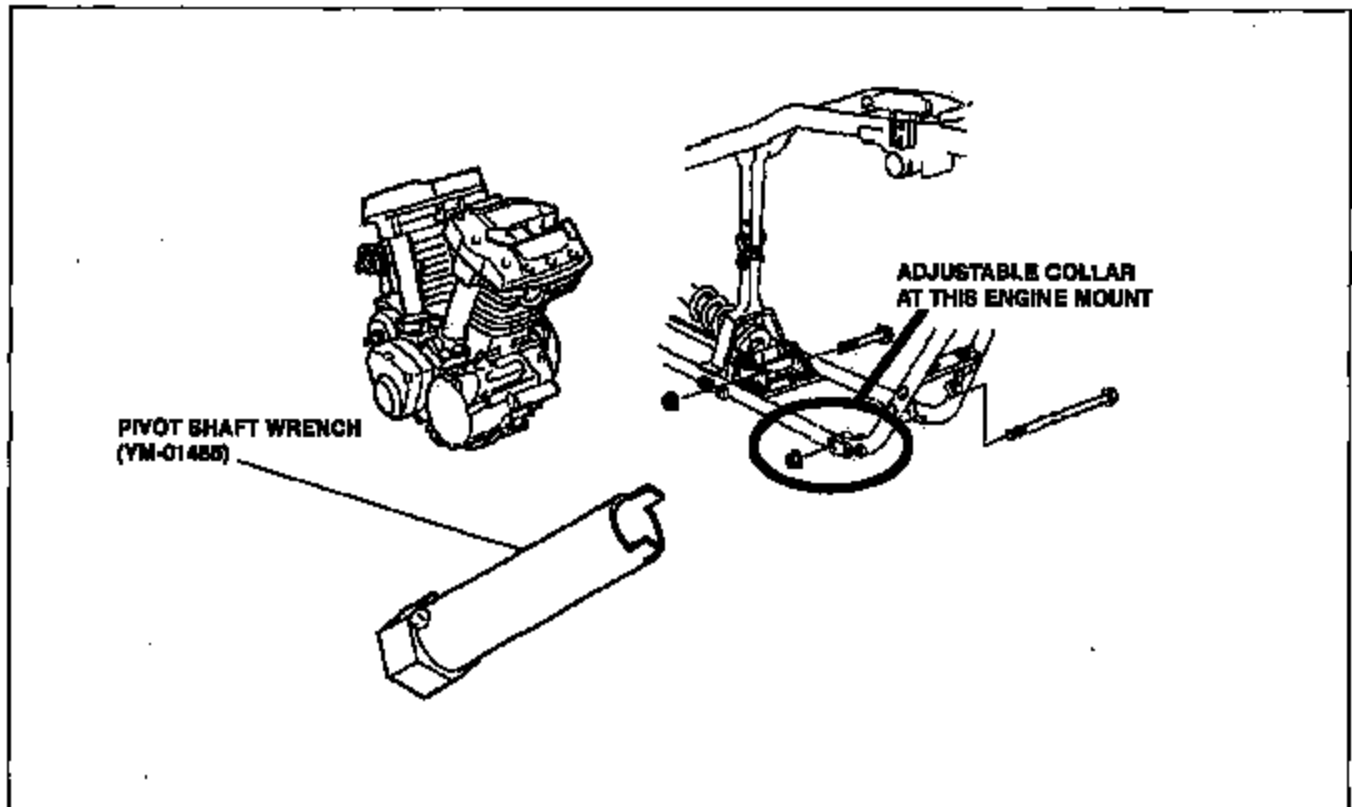
During Engine Removal

1. Loosen all engine mount bolts, but do not remove the bolts.
2. Using the special tool Pivot Shaft Wrench (YM-01485), turn the adjustable collar counterclockwise, loosening the collar away from the engine.
3. Now remove all the mount bolts.

NOTE: A mount bolt acts as a guide for the Pivot Shaft Wrench, so the bolt must be in place whenever using the wrench to turn the adjustable collar.

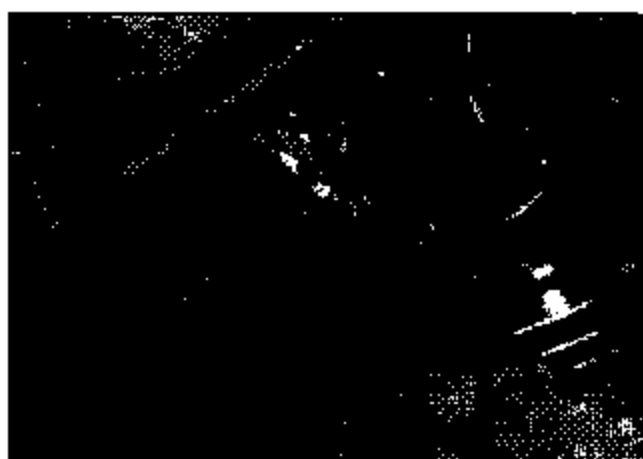
During Engine Installation

1. Install the front and rear lower engine mount bolts, but do not tighten the bolts.
2. Using the special tool Pivot Shaft Wrench (YM-01485), turn the adjustable collar clockwise and torque it to 18Nm (1.8m-kg, 13 ft-lb).
3. Now install all the mount bolts.



Linear Control Valve Removal Tips

Removal of the linear control valve mounting screws may appear difficult due to its compact location. However, using a short piece of a ball end 5mm allen driver inserted into a piece of carburetor vent hose will ease the removal of the screws (see adjacent photos).



Routing of Spark Plug Wires Tips

When reinstalling the ignition coils, use the diagram below to correctly route the wires. If additional routing information is needed, refer to pages 2-38 ~ 2-48 of the XV1700P/PC Service Manual (LIT-11616-15-37).

