

02A Transaxle Swap into VW mk2 Chassis

*Note: This write-up does not discuss the differences in procedure for cars currently using an automatic transaxle. This is a basic guide to the process – not a step-by-step detailed how-to. The assumption is made that the person doing the swap is mechanically inclined, intimately familiar with the mk2 chassis, and has access to a Bentley service manual.

Needed 02A swap parts:

- 02A Transaxle (g60, passat 16v, vr6) (coordinate version with motor type)
- Mk2 axles with 100mm diameter inner cv joint
- G60/passat 16v speedometer cable
- Corresponding 02A Starter
- Corresponding 02A Flywheel
(Match to motor: 6-bolt 02A flywheel is 4-cylinder, 10-bolt for vr6)
- Corresponding 02A Clutch Kit
- Recommend new throw-out bearing and guide tube kit
- New transaxle fluid (Redline MT-90 is the performance upgrade for the 02A)
- NEW flywheel & Pressure Plate Bolts for 4-cyl. (not necessary for vr6)
- Shifter box & cables
- Pedal Cluster
- Clutch master cylinder
- Clutch master cylinder bracket
- Clutch master cylinder supply line
- Slave cylinder
- Slave cylinder supply line
- 02A brake/clutch fluid reservoir

Removal of existing pedal cluster

- For better access to the pedal cluster area; remove the center console then remove the dash parcel trays/knee bar setup depending which year the car is.
- Disconnect throttle cable from accelerator pedal.
- Disconnect wiring to the switches mounted on the pedal cluster above the brake pedal and clutch pedals. If you do not have cruise there won't be a switch mounted there. If you have cruise there will also be a vacuum line to detach.
- Disconnect clutch cable from actuating lever on transaxle and then disconnect the other end from the pedal cluster. Remove the clutch cable completely from the car.
- Remove the speedometer cable from the transaxle as well as the speedometer.
- Remove the nuts holding the pedal cluster to the firewall. There are also nuts below the carpet and nuts straight up below the dash cluster. Look at the 02A pedal cluster for locations for clarification.
- Disconnect steering column from the pedal cluster near clutch pedal.
- It may be necessary to detach the steering column for ease of pedal cluster removal. Unbolt if necessary.

- With the nuts now removed, the brake booster can gently be pulled away from the firewall in the engine bay. Locate the hole for the clutch cable and remove the metal retaining ring and rubber grommet.
- Remove pedal cluster from interior of car and compare to 02A cluster for increased understanding of the differences.

Installation of 02A Pedal Cluster

- Remove the brake booster from the brake master cylinder/reservoir assembly.
- Locate the (3) small rubber plugs on the firewall to the right of where the brake booster mounts. Remove the two rubber plugs closest to the brake booster. Just above these plugs is a stud protruding from the firewall. Remove the stud and grind the surface smooth.
- Install the 02A Pedal cluster. You may need to remove the plastic guard along the clutch pedal side because of the mk2 fuse box brackets being in the way. Notice in the upper left corner that the pedal assembly interferes with an existing stud that was previously used to mount the 020 pedal cluster. Take the cluster back out and remove the stud.

NOTE: Insulation and carpet are flammable! If planning to grind the stud off – protect insulation and carpet with a damp rag to prevent grinding sparks from igniting.

- Take the clutch master cylinder mounting bracket and test fit it to the pedal cluster. Notice how there is a stud protruding from the back of the bracket thru a corresponding hole in the cluster. There currently is no hole in the firewall there so one needs to be made.
- Install the cluster back into the car. Locate the hole location on the firewall with a marker. Remove the cluster and drill a hole in the firewall at the location you just marked. Use the diameter of the hole in the pedal cluster for the size of the firewall hole.
- Put the pedal cluster back into the car. Test fit the clutch master cylinder bracket to verify that the hole you just drilled is in the right location so that the bracket will sit flush. Enlarge the hole slightly if necessary, repeating the process just completed.
- When the two pieces fit together correctly – tighten a nut onto the stud you just drilled the hole for. This will hold the two pieces together in the correct location while you drill the hole for the clutch master cylinder.
- Use a 1-1/4” hole-saw thru the hole in the bracket to make the hole for the clutch master cylinder.
- Remove the bracket from the car and install on rear of brake booster. If using the stock 020 booster – remove the existing bracket and replace with 02A bracket. Do not remove the detachable seal extension from the booster. Be sure to attach the brake pedal to the brake booster arm.
- Mount the booster/bracket assembly to the firewall and install the pedal cluster mounting nuts inside the car. Attach the brake pedal to the brake booster as well.
- Mount the brake master cylinder/reservoir to the brake booster.

- Mount the clutch master cylinder to the bracket, and then connect the master cylinder to the clutch pedal.
- You can now reassemble the interior of the car in the reverse order of removal. Be sure to reattach the wiring for the brake switch and clutch switch (if equipped), and the throttle cable.
- Do not install the center console yet – as you still need to install the 02A shift box.

Installation of 02A Shift Box & Cables

- Disconnect the shifter linkage from the transaxle in the car.
- Unbolt the linkage bracket from the steering rack, and then unbolt the retaining clamp on the end of the main shift rod.
- Remove the linkage assembly from the rack and from the main shift rod.
- Disconnect the exhaust so that you can drop the front exhaust shielding under the car to gain access to the shifter box. Depending on the car, you may need to disconnect the down pipe as well. Disconnect and remove the exhaust.
- Unbolt the shift box from underneath the car, and remove.
- The new shift box is narrower and longer than the mk2. This will allow you to place the shift box inside of the current bolt hole locations. Although the bolts will not go thru the shift box, it will be held securely by the heads on the bolts and will not move around.
- Run the shifter cables above the steering rack to the transaxle.
- Fasten the shift box to the car using the existing bolts. If you cannot properly thread the bolts in, slightly trim the new shift box around the bolt location to allow just enough clearance for the bolt. Do not remove too much material because that material is what is held by the bolt head.
- Reinstall the exhaust shield. Reinstall the exhaust that you disconnected as well unless you prefer to have it disconnected for when you change the clutch/transaxle setup.

Installation of 02A Transaxle

- Remove the 020 transaxle in the same manner you would to change the clutch.
- Install the new clutch kit and then the transaxle in the same manner you would normally be putting the 020 back in. however you are changing all of the necessary components to the needed 02A where applicable.

Final Assembly

- Attach the slave cylinder feed line to the clutch master cylinder.
- Attach the slave cylinder to the feed line and to the transaxle.
- Attach the shift cable mounting bracket to the transaxle, and then attach the shift cables to the shift tower. Center the bolts on the respective brackets to get the shifter close for now.
- Remove the fluid from the brake fluid reservoir and remove the reservoir from the master cylinder.
- Install the new fluid reservoir and the feed line to the clutch master cylinder.

- Fill reservoir with fluid and then bleed your brake system in the normal manner.
- Bleed the clutch master cylinder.
- Bleed the slave cylinder.
- Install new speedometer cable.
- Adjust shifter inside the car according to factory method, and then reinstall center console and anything else still disconnected.

- System check:
 - Check for correct pedal feel in all pedals.
 - Check brake lights.
 - Check reverse lights.
 - Check throttle cable attachment.
 - Check for vacuum leaks.
 - Check starter wiring.

- Start car, test brakes, clutch, etc.
- Test drive gently and then double check for fluid leaks and any other problems.