86-89 Suzuki Samurai Pedal Rebuild Kit

SKU# SIB-PRB

Instructions also includes clutch adjustment procedures.

Installation Instructions

We also supply replacement peddle pads. Click HERE for more information.

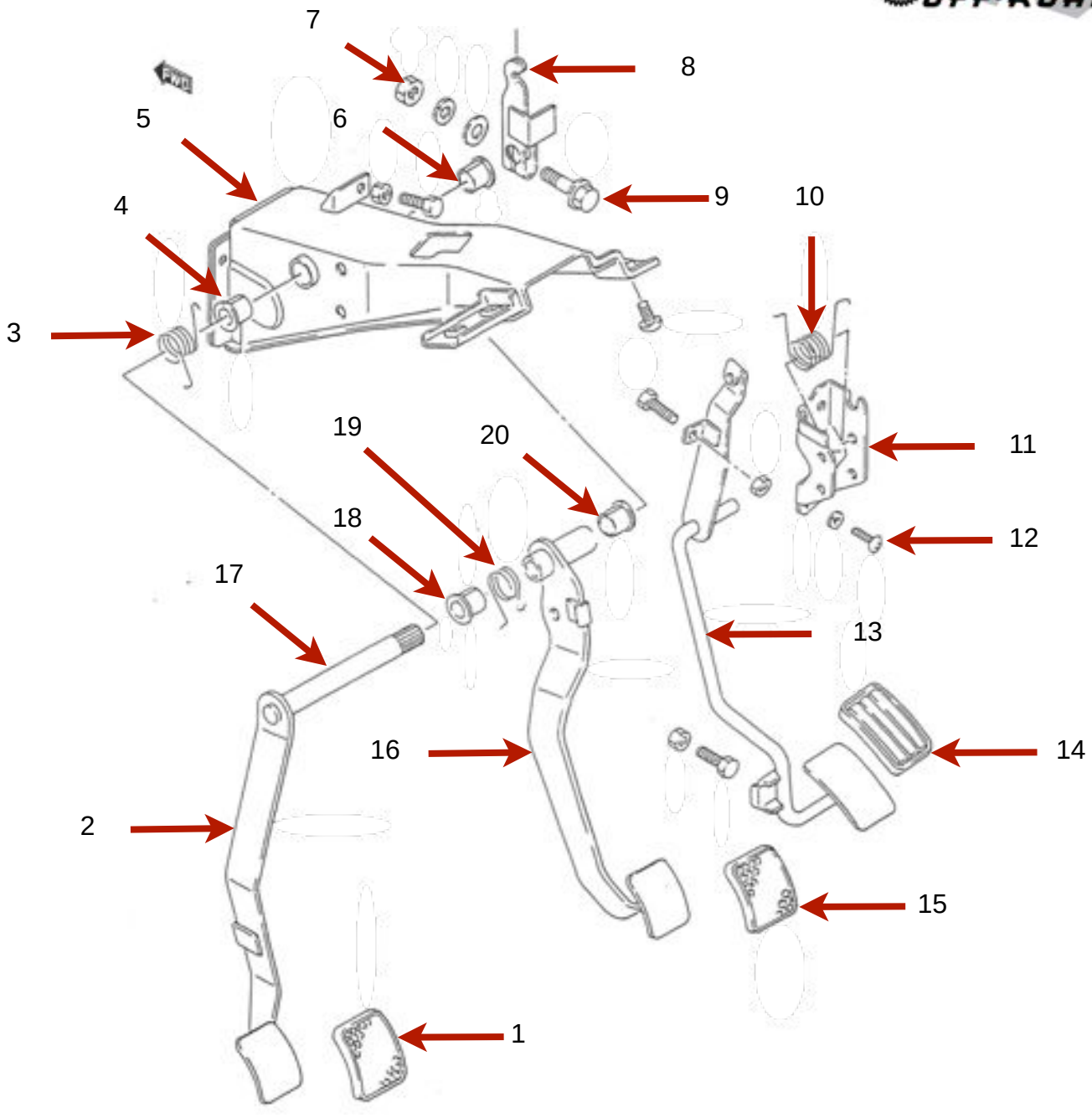
Suggested Tools:

- Standard Screwdriver
- Phillips Screwdriver
- Impact Driver (Optional)
- Combination Wrenches: 10,12,14, &17 mm
- Needle Nose Pliers
- Lubricant (Supplied with Kit)

CAUTION: Safety glasses should be worn at all times when working with vehicles and related tools and equipment.

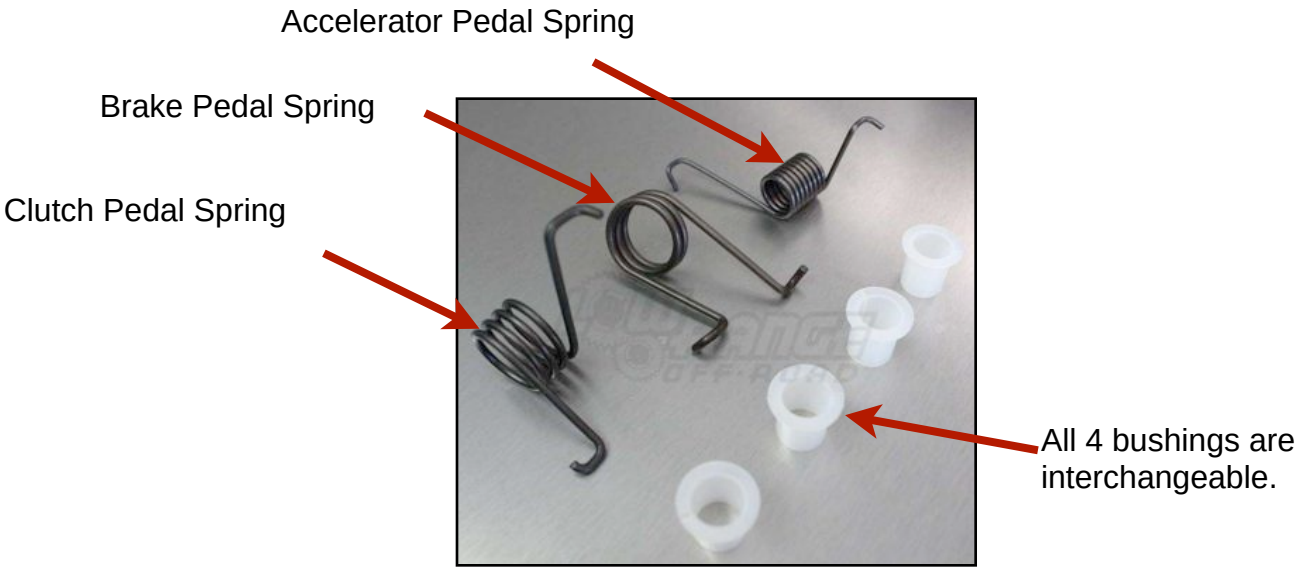
LOW RANGE OFF-ROAD
WWW.LOWRANGEOFFROAD.COM Phone: 801-805-6644
1195 S 1680 W
Orem, UT 84058 USA

Pedal Parts Identification

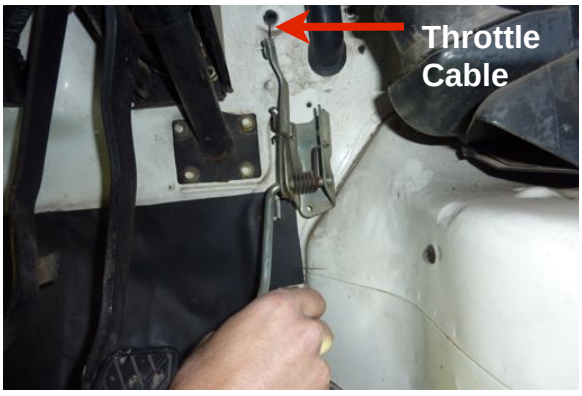


1. Clutch Pedal Pad
2. Clutch Pedal
3. Clutch Pedal Spring
4. Bushing #2
5. Pedal Bracket
6. Bushing #3
7. Clutch Arm Nut & Washers
8. Clutch Arm
9. Clutch Arm Bolt
10. Accelerator Spring
11. Accelerator Bracket
12. Accelerator Bracket Screw
13. Accelerator Pedal
14. Accelerator Pad
15. Brake Pad
16. Brake Pedal
17. Pedal Shaft
18. Bushing #1
19. Brake Pedal Spring
20. Bushing #4

Spring Identification



Accelerator Pedal Spring Replacement



Step 1

Disconnect the accelerator pedal bracket from the firewall by removing the (2) phillips screws using a phillips screw driver.

Note: These screws may be quite tight and may require the use of an impact driver to remove them. To see our video on impact driver use click HERE.

Tech Tip

Do not disconnect the throttle cable.

Step 2

While holding the accelerator bracket in one hand, disconnect the right leg of the spring using a 10 mm open end wrench as a lever.

Step 3

Let both legs of the spring relax and drop down as shown.

Step 4

Slide the spring and bracket off the accelerator pedal shaft.

Step 5

Remove the accelerator spring from the accelerator bracket.

Step 6

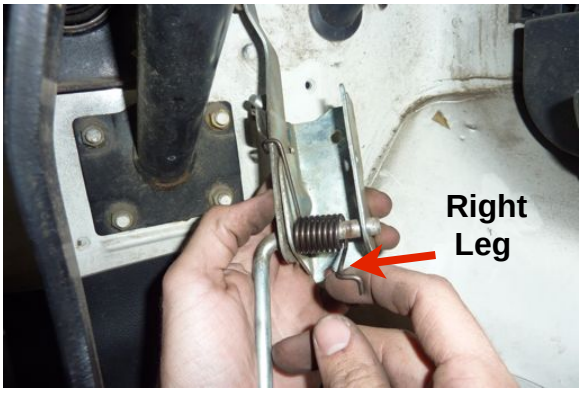
Position the new spring with the left leg pointing up and the left leg pointing down as shown.

Step 7

Reinstall the accelerator pedal shaft as shown.

Tech Tip

Accelerator pedal properly installed.



Step 8

With the left leg of the spring positioned up, rotate the right leg of the spring upward, against spring tension.

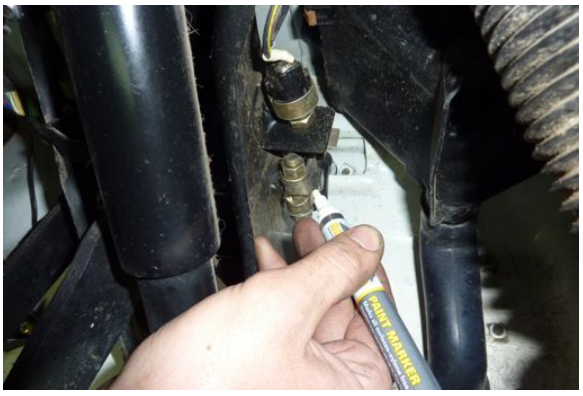
Step 9

Insert the right leg of the spring in the correct hole in the bracket with your thumb.

Step 10

Position the accelerator bracket back in its original position. Then install and tighten the (2) phillips screws.

Clutch and Brake Pedal Rebuild



Step 11

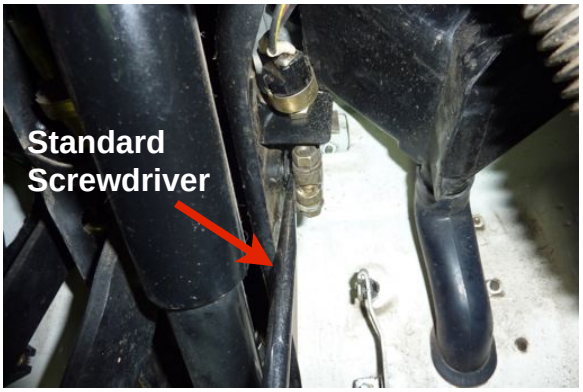
To insure that the clutch pedal is returned to the exact same position, mark the clutch arm and pedal shaft with a permanent marker.

Note: Returning the clutch arm to the exact same position on the clutch shaft will save time at the end of the job.

Step 12

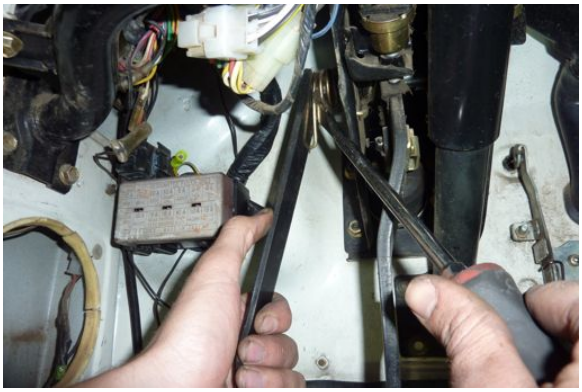
Loosen the clutch arm nut using a 12 mm box end wrench.

Note: It may be necessary to hold the bolt from turning with a second 12 mm wrench.



Step 13

Pry the clutch arm slightly (about 1/4”) to the right with a standard screwdriver.

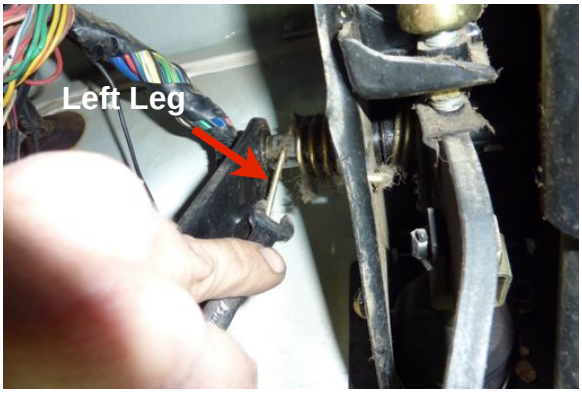


Step 14

Pry the clutch pedal and shaft to the left (about 1/2”) using a standard screwdriver.

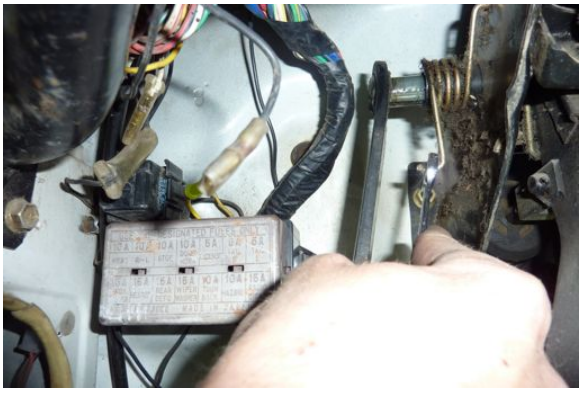
Step 15

Repeat Steps 13 and 14 until the clutch arm comes off the shaft. Once the clutch arm comes off the shaft, unhook the clutch cable and set the clutch arm aside.



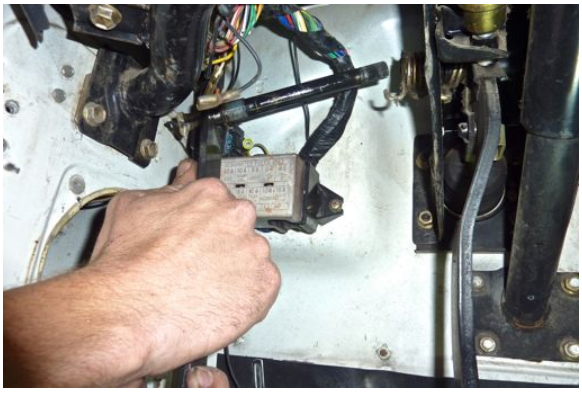
Step 16

Disconnect the left leg of clutch pedal spring using a 10mm open end wrench as a lever.



Tech Tip

Spring properly disconnected.



Step 17

Continue sliding the clutch pedal and pedal shaft to the left until it can be removed.

Step 18

Remove the clutch pedal spring and clean the area it came from with a cloth.

Step 19

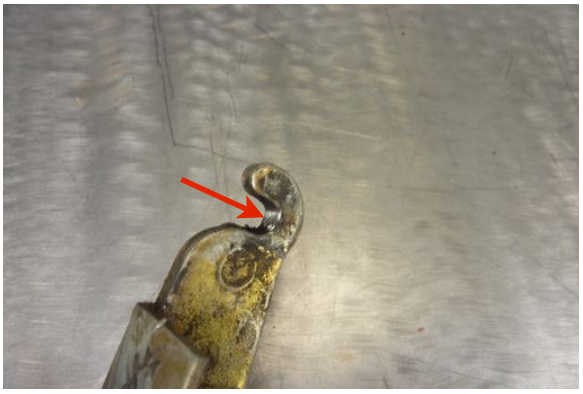
Remove bushing #1 from the pedal shaft. Wipe the shaft clean with a cloth.

Step 20

Inspect the shaft splines for wear. Replace the shaft if wear is observed.

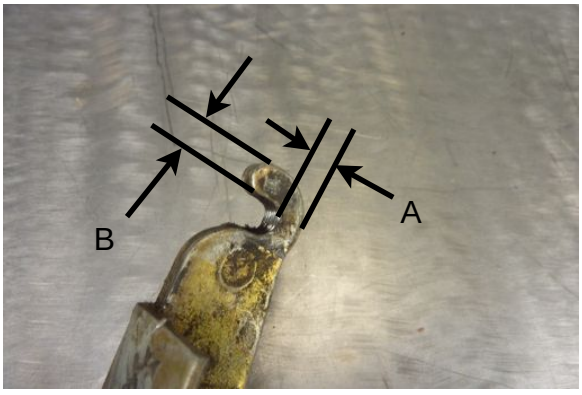
Step 21

Inspect the clutch lever splines for wear. Replace the clutch lever if the splines are damaged.



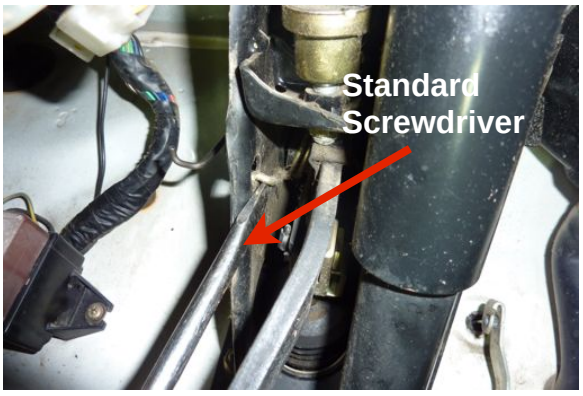
Step 22

Inspect the clutch lever hook for wear. Replace the lever if excessive wear is observed in the area shown by the arrow.



Tech Tip

Distance A should be approximately the same as distance B. If distance A is less than 3/4 of distance B, the clutch lever should be replaced.



Step 23

Disconnect the brake pedal spring by prying with a standard screwdriver.

Step 24

Begin removing the brake pedal by removing the cotter pin using needle nose pliers.

Step 25

Rotate the brake pedal to the left as shown and remove the push rod pin.

Step 26

Rotate the pedal to the right and remove the pedal.

Step 27

Remove bushing #3 from the brake pedal.

Step 28

Rotate the brake pedal 1/2 turn and remove bushing #2. Then wipe out the bushing area with a cloth.

Step 29

Prepare bushing #3 for installation by applying the supplied lubricant to the out side of the bushing.

Step 30

Install bushing #3 inside the brake pedal as shown.

Step 31

Apply lubricant to the outside of bushing #2.

Step 32

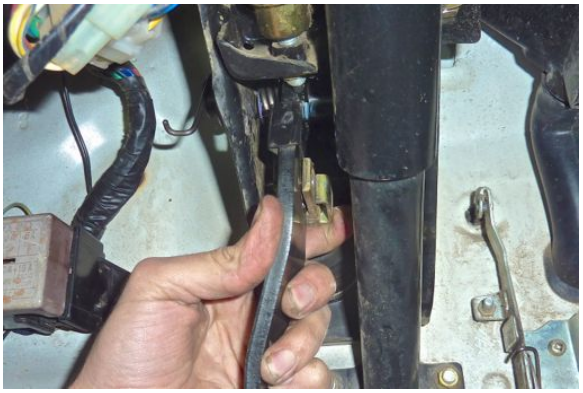
Install bushing #2 in the brake pedal as shown.

Step 33

Apply lubricant to the inside of bushing #2 and #3.

Step 34

Position the brake pedal spring with the long leg away from the pedal as shown.



Step 35

Position the brake pedal back in its original position as shown.

Step 36

Insert the push rod pin.

Step 37

Insert the cotter pin and bend the legs as shown in the next tech tip.

Tech Tip

Cotter pin properly installed and secured by bending the legs.

Step 38

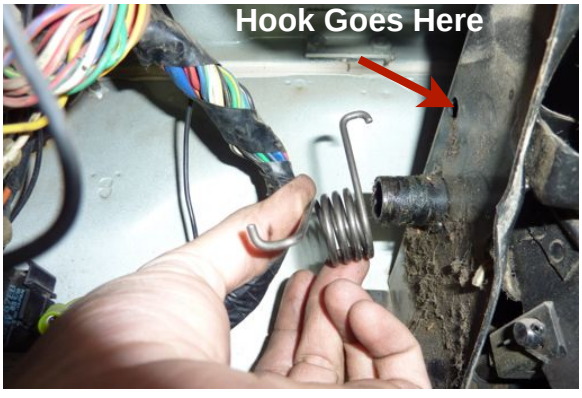
Apply some lubricant to the outside of bushing #1.

Step 39

Apply some lubricant to the pedal shaft where bushing #1 will be installed.

Step 40

Install bushing #1 on the pedal shaft.



Step 41

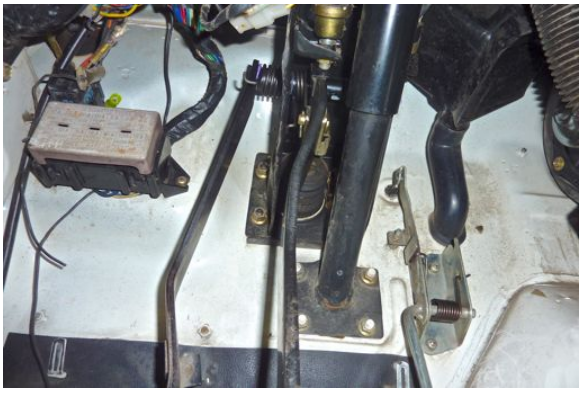
Install the supplied clutch pedal spring as shown.

Note: Be sure the hook goes in the hole in the pedal bracket.

Step 42

Install the clutch pedal and shaft back into the pedal bracket as shown.

Note: It may be necessary to move the brake pedal around a bit to allow the pedal shaft to pass through.



Tech Tip

Clutch pedal and shaft properly installed.

Note: Do not position the left leg of the clutch spring yet. That will come later.

Step 43

Apply lubricant to the outside and inside of bushing #4.

Step 44

Install bushing #4 over the pedal shaft and inside the pedal bracket.

Note: It may help to move the shaft around by moving the clutch pedal while installing this bushing.

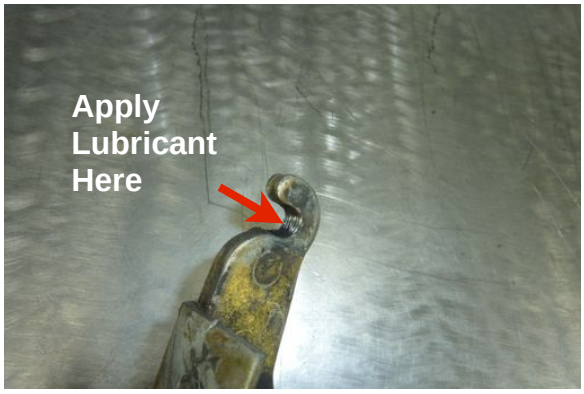
Step 45

Position the left leg of the clutch pedal spring behind the pedal using needle nose pliers as shown.

Note: It is helpful to lift up on the clutch pedal while connecting this spring.

Step 46

Position the left leg of the brake pedal spring in the hole in the pedal bracket using needle nose pliers.



Step 47

Apply some lubricant to the hook of the clutch lever.

Step 48

Hook the upper end of the clutch lever into the clutch cable and attach the lower end on the pedal shaft splines.

Note: Be sure to orient the lever and shaft exactly as they were before disassembly.

Step 49

Check the clutch pedal position in relation to the brake pedal. The clutch pedal should be level with the brake pedal. If it is not, reposition the clutch lever on the pedal shaft until correct pedal height is achieved.

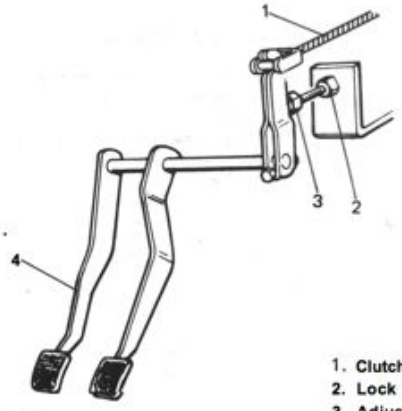
Note: Exact pedal height may not be possible in this step; but it needs to be as close as possible.

Step 50

Once the pedal height is as close as possible, tighten the clutch pedal lever nut and bolt.

Note: To achieve the exact clutch pedal height adjustment continue to the next step.

Clutch Pedal Height Adjustment Procedure



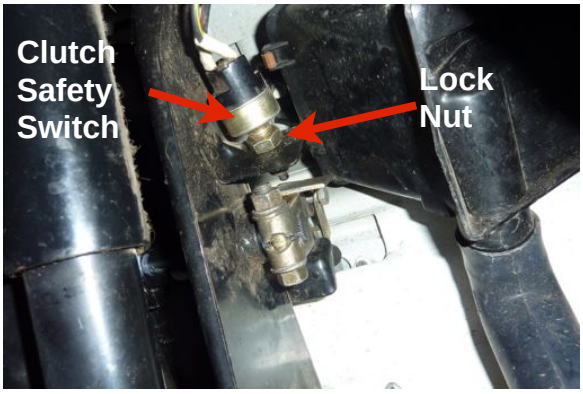
1. Clutch cable
2. Lock nut
3. Adjust bolt
4. Clutch pedal

Fig. 11- **18**

Step 51

Clutch Pedal Height is adjusted by loosening the lock nut and turning the adjustment bolt up or down until the clutch pedal is level with the brake pedal. Be sure to tighten the lock nut after adjustment.

Clutch Safety Switch Check & Adjustment



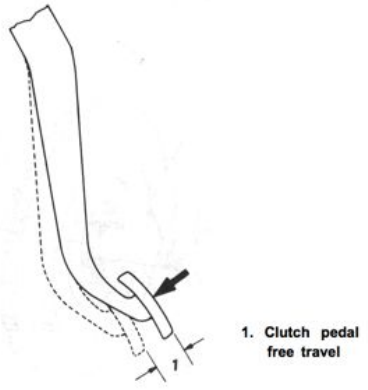
Step 52

The clutch safety switch check is done by placing the shifter in the neutral, setting the park brake, turning the key to the start position, and slowly depressing the clutch pedal until the engine cranks. The pedal position at which the engine cranks is called the “Pedal Crank Point”. The engine should crank when the pedal reaches 2 to 3 inches from the floor. If the engine cranks when the pedal is not within this specification, loosen the lock nut using a 14mm open end wrench and rotate the clutch safety switch clockwise to raise the crank point and counterclockwise the lower the crank point. Then tighten the lock nut. Check the “pedal crank point” again. If it is within specifications you are done. If not, keep adjusting the switch until the specified crank point is achieved.

Clutch Pedal Free-Play Adjustment

Caution:

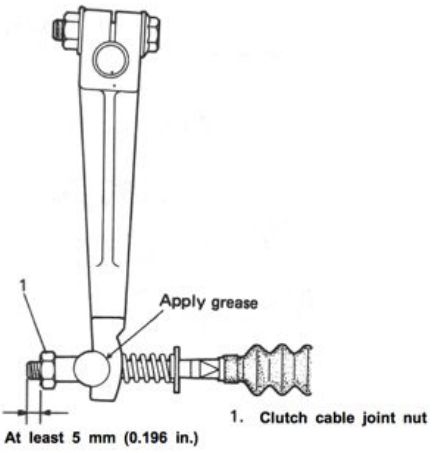
Clutch Pedal Free Play is very important. If clutch pedal free play is too great, you could experience a grinding or hard shifting when changing gears. If free play is too little, premature throwout bearing failure could result and in extreme cases the clutch will slip causing the clutch disc itself to wear out extremely fast.



Clutch pedal free travel	20-30mm (0.8 – 1.1 in.)

Step 53

Depress the clutch pedal with your hand and stop when resistance is felt. Then measure the distance the pedal traveled. This measurement is called “pedal free play”. The pedal free play should be within .8 to 1.1 inches (or 20 to 30 mm). If pedal free play is NOT within specification the clutch will require adjustment.



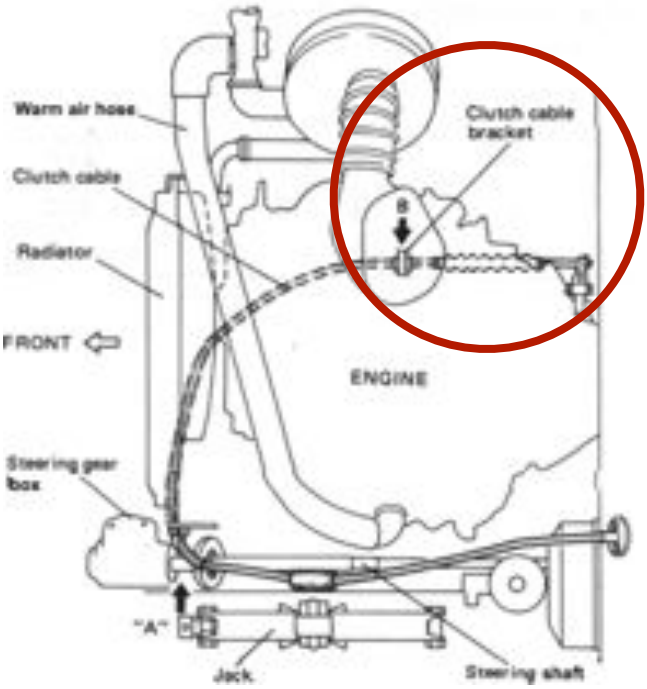
Step 53 Continued

Clutch adjustment is performed from under the vehicle, on the passenger side rear of the engine, near a component called the transmission. (See Photograph below) To increase clutch pedal free play, turn the clutch cable joint nut **COUNTERCLOCKWISE** using a 14 mm wrench. To decrease clutch pedal free play, turn the clutch cable joint nut **CLOCKWISE**.

Note: After adjusting pedal free play there should be at least .2" (or 5 mm) of cable end extending past the nut. If there is, you are done. If there is less than .2" extending past the cable joint nut, proceed to the next step.

Photograph of Clutch Cable Joint Nut

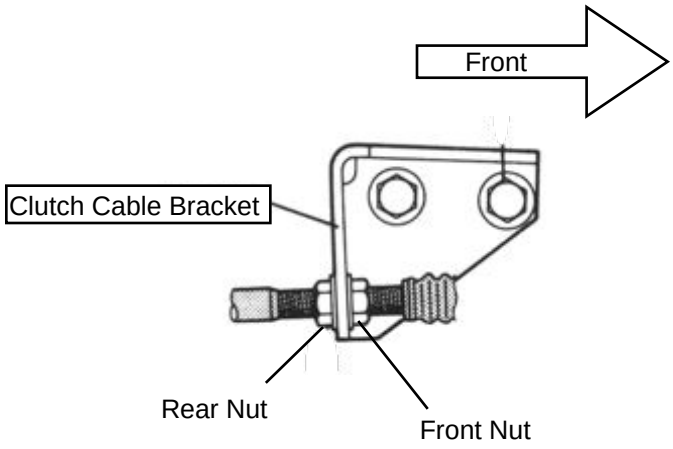
Clutch Cable End Adjustment



Step 54

Locate the clutch cable bracket positioned on the passenger side of the engine below the air cleaner. See illustration above and photograph below.

Photograph of Clutch Cable Bracket.



Step 54 Continued

Loosen (downward) the front nut using a 17 mm open end wrench. Turn the rear nut an equal amount in the same direction (downward) until it becomes tight. Then check and adjust the clutch pedal free play again as explained in Step 53. If there is still not enough (.2" minimum) clutch cable end extending out of the cable joint nut, repeat this step (Step 54) until there is.

Congratulations:

You have successfully completed a pedal rebuild and related adjustments. We sincerely hope these instructions were helpful. If you have suggestions for improvement please email: coleman@lowrangeoffroad.com.

As always, If you experience any difficulty during the installation of this product please contact Low Range Off-Road Technical Support at 801-805-6644 M-F 8am-5pm MST. Thank you for purchasing from Low Range Off-Road.

WARNING

These instructions are designed as a general installation guide. Installation of many Low Range Off-Road products require specialized skills such as metal fabrication, welding and mechanical trouble shooting. If you have any questions or are unsure about how to proceed, please contact our shop at 801-805-6644 or seek help from a competent fabricator. Using fabrication tools such as welders, torches and grinders can cause serious bodily harm and death. Please operate equipment carefully and observe proper safety procedures.

Rock crawling and off-road driving are inherently dangerous activities. Some modifications will adversely affect the on-road handling characteristics of your vehicle. All products sold by Low Range Off-Road are sold for off road use only. Any other use or application is the responsibility of the purchaser and/or user. Some modifications and installation of certain aftermarket parts may under certain circumstances void your original dealer warranty. Modification of your vehicle may create dangerous conditions, which could cause roll-overs resulting in serious bodily injury or death. Buyers and users of these products hereby expressly assume all risks associated with any such modifications and use.