DURACLUTCH INSTALLATION
15-511 DCG1-RANGERDSL-Y

SVI, LLC REV8

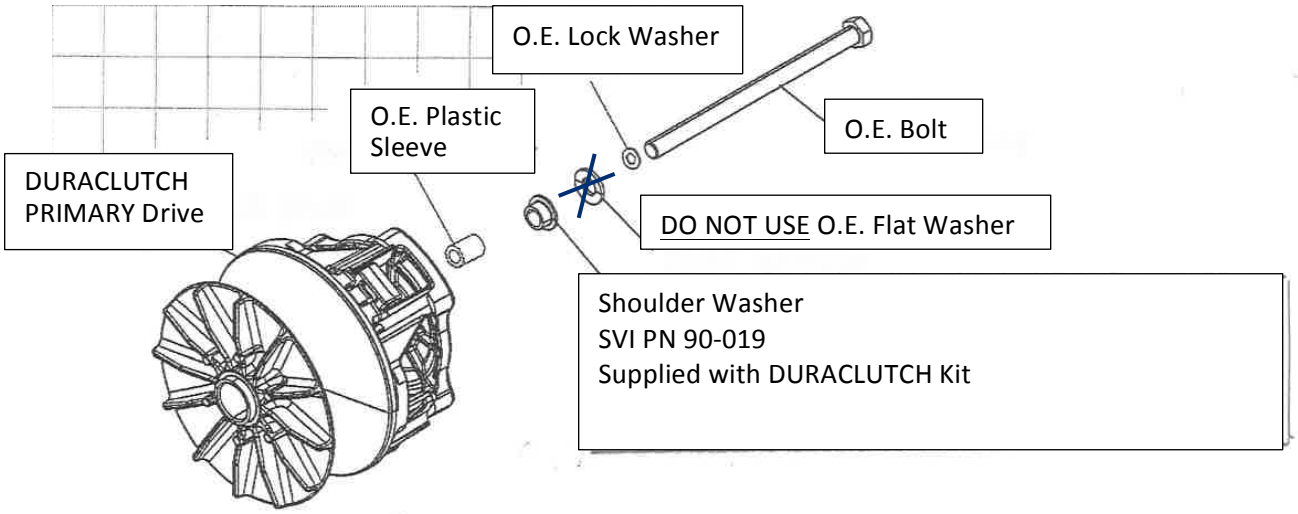
PART #: 15-511
MODEL: DCG1-RANGERDSL-Y
DESCRIPTION: RANGER 900 DIESEL ALL MODELS (YANMAR)

KIT CONTENTS:

1	10-104 PRIMARY CLUTCH
2	90-019 SHOULDER WASHER
3	10-076 SECONDARY CLUTCH REV2
4	3211160 BELT
5	7556120 4 WASHERS – ALIGNMENT SECONDARY
6	30-093 TOOL-BELT INSTALL
7	97-010 DECALS - CLUTCH HOUSING AND DASH 3211160
8	OWNERS MANUAL SUPPLEMENT
9	DURACLUTCH WARRANTY
10	INSTALLATION INSTRUCTIONS 15-511 (THESE INSTRUCTIONS)

DURACLUTCH INSTALLATION

1. Remove the Secondary clutch.
2. Install DURACLUTCH Secondary. Note the number of washers behind the secondary for Step 9. There should be 1 to 3. Add 2 more washers. (There are 4 supplied with kit.) Tighten bolt to 17 ft-lbf.
3. Remove Primary clutch bolt. This bolt is left hand thread. Remove the Primary clutch with a puller (SVI 25-147). The puller is right hand thread. Greasing the end of the puller slightly will aid in removal. Do not get grease on any clutch components.
4. Clean the engine tapered shaft and Primary clutch bore with alcohol or degreaser. Do not lubricate.
5. Slip the belt into the Primary and over the Secondary.
6. Install DURACLUTCH Primary with shoulder washer as shown. DO NOT USE the O.E. flat washer. It may interfere with the primary cover. Tighten bolt to 60 ft-lbf.



O.E. = Original Equipment

7. Install the belt as follows if the Primary and Secondary clutches are already installed. Place belt in the Primary and open the Secondary sheaves with the Belt Installation Tool provided (see photo). Roll the belt into the Secondary sheaves.

8. Set belt tension. Place transmission in neutral and set park brake. APPLY FOOT BRAKE TO INSURE VEHICLE REMAINS STATIONARY. Apply slight throttle to turn Secondary.
9. Shift transmission through gears: HI-LO-N-REV. If shift is difficult check idle RPM and make sure less than 1000 RPM. See INSTALLATION SUPPLEMENT.
   If shifting is still difficult the secondary alignment needs adjustment. See step 2 above. Remove one of the washers from behind the secondary and check shifting. If still difficult remove another washer, etc. until shift is satisfactory. If still not satisfactory add washers back more than the 2 added earlier. If still difficult call Mitchell's cell phone at 218-242-3761.
10. Install outer clutch housing. Insure seal is good or replace. The DURACLUTCH primary is slightly larger than the original equipment primary. To insure the primary does not rub against the cover push up and back on the housing while lightly snugging the bottom screws. Then tighten the top rear screw followed by the other top screws. Then tighten all remaining screws including the bottom screws evenly. After starting the engine if you hear the primary rubbing, push on the cover while the engine is running in different directions to see which way will eliminate the rubbing. Stop the engine and loosen the housing screws and retighten using the above sequence while pushing on the cover in the direction that eliminated the rubbing. If this does not eliminate the rubbing try installing a new gasket and go through the bolt tightening sequence again. If you cannot eliminate the rubbing the cover is heat warped and you may have to install a new cover and perhaps a new back plate. You may also try using a heat gun to remove heat sag in the cover.

DECALS

11. Apply two decals as shown – one on the clutch housing and one on the dash. Clean surface with alcohol or similar non-harsh solvent. Decal application is important to alert service technicians that the standard Polaris clutches have been replaced.

RANGER 900 DIESEL AND DIESEL CREW (YANMAR)
DURACLUTCH INSTALLATION SUPPLEMENT

IT IS IMPORTANT TO COMPLETE THESE
SUPPLEMENTARY INSTRUCTIONS FOR BEST PERFORMANCE

There is a 15% speed increase between the engine and Primary drive. The engine idle speed must be 950 – 1000 RPM (1100 – 1150 Primary RPM). This is to insure the heavy diesel flyweights in the Primary clutch do not put thrust load on the movable sheave clutch pack before the clutch packs engage. This thrust load may increase drag and the gear transmission may not shift easily between HI, LO and REVERSE.

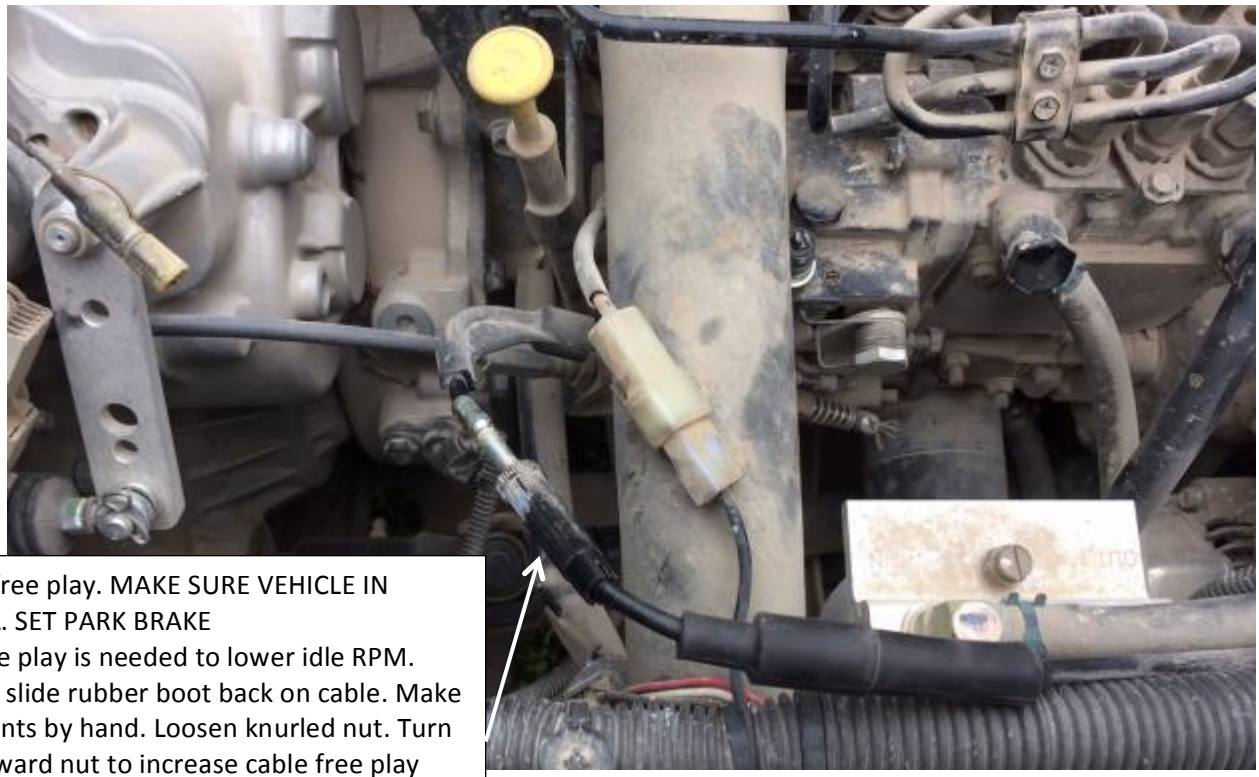
WARNING: WHEN MAKING ADJUSTMENTS MAKE SURE THE VEHICLE IS IN NEUTRAL AND THE PARK BRAKE IS ON!

1. Lower the idle RPM if above 1000 RPM. Before lowering the engine idle RPM there must be free play in the cable or it will not be possible to make the adjustment. Adjust cable free play per photo instructions.

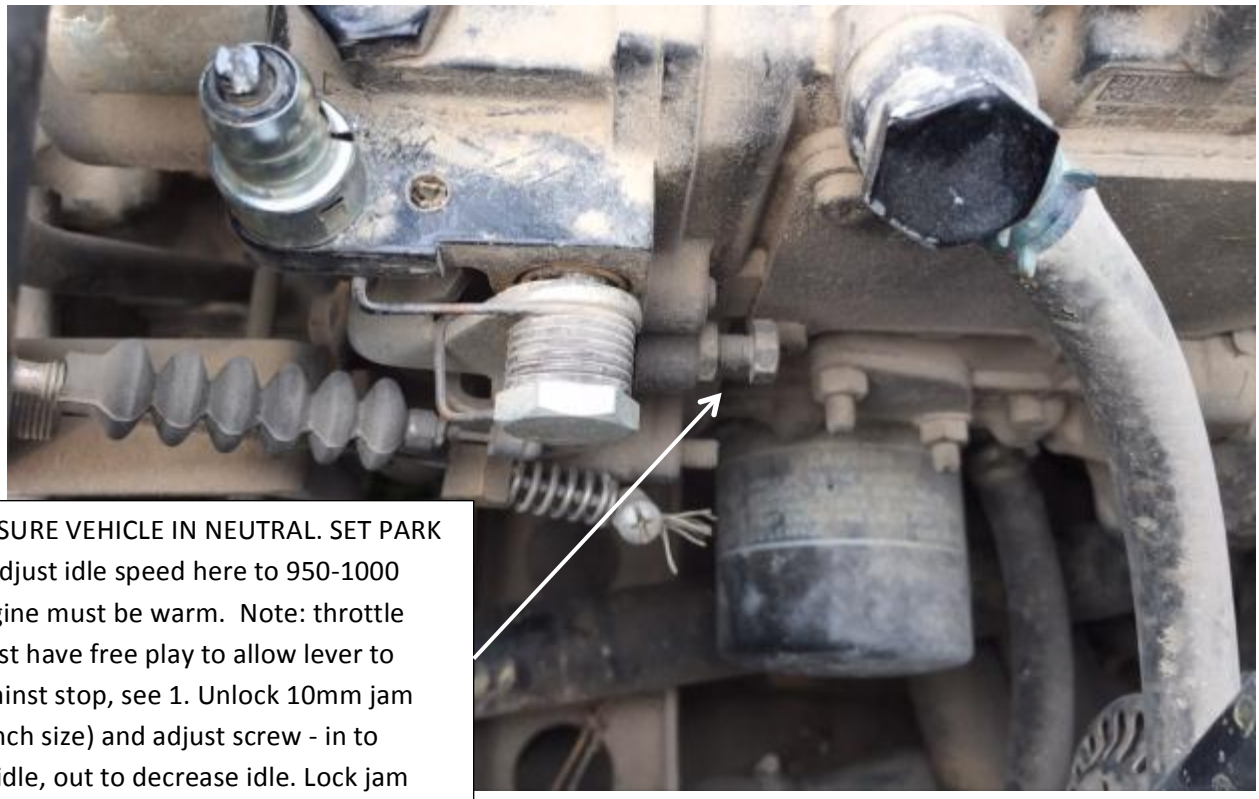
2. Adjust the idle per photo instructions. The engine must be warm.

3. Run the vehicle full throttle on a level hard packed road and check to see if the engine RPM reaches 3600. If not, adjust the high speed throttle stop to increase the full throttle RPM and check again on the road. If necessary re-adjust until the RPM is 3600 on the road at full throttle. See photo instructions.

   Note: We have found that the full throttle engine RPM without load will be 3750 to 3800. You can shortcut the process and adjust as follows.
   - Make sure the clutch housing cover is installed
   - Place the gear selector in Neutral
   - Apply the Park Brake
   - Check full throttle RPM in Neutral
   - Adjust the full throttle stop to get 3750-3800 RPM
   - Check to see if RPM is 3600 under load on the road
   - Readjust if necessary.



1. Cable free play. MAKE SURE VEHICLE IN NEUTRAL. SET PARK BRAKE
Cable free play is needed to lower idle RPM. To adjust slide rubber boot back on cable. Make adjustments by hand. Loosen knurled nut. Turn barrel toward nut to increase cable free play (shorten). Turn away from nut to decrease free play (lengthen). After idle RPM is set adjust barrel so cable is just tight and then back off ½ turn. Lock knurled nut against barrel. There should be ¼" to ½" free travel in the foot pedal before the throttle opens. After all adjustments complete slide rubber boot back in place.



2. MAKE SURE VEHICLE IN NEUTRAL. SET PARK BRAKE. Adjust idle speed here to 950-1000 RPM. Engine must be warm. Note: throttle cable must have free play to allow lever to move against stop, see 1. Unlock 10mm jam nut (wrench size) and adjust screw - in to increase idle, out to decrease idle. Lock jam nut.

3. Check full throttle RPM on a hard packed road. RPM should be 3600. Engine must be warm.
If needed adjust the high speed throttle stop. Gently remove the cap on the high speed adjustment. While prying up with a thin blade place a screwdriver in the slot and pull up.

With cap off

To adjust full throttle RPM unlock the screw with 10mm wrench (CCW) while holding screw. Adjust screw out to increase RPM (CCW). While holding the screw, lock throttle adjustment with wrench. Re-check full throttle RPM. Replace cap.