

GROUP 4

CLUTCH, 3-SPEED TRANSMISSION

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SECTION 4-A

CLUTCH AND CONTROLS

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The Gran Sport Skylark has a specific clutch assembly and controls. The clutch assembly and controls will not be interchangeable with Special or Skylark models.

4-1 REMOVAL, LUBRICATION, AND INSTALLATION OF CLUTCH

a. Removal from Vehicle

NOTE: For clutch pressure plate and driven plate removal refer to Steps 1, 2, 3, 6, 10, 11 and 12.

For clutch internal controls removal refer to Steps 1 thru 9.

1. Remove transmission.
2. Disconnect lower clutch release rod assembly from equalizer. See Figure 4-1.
3. Loosen nut on frame side of equalizer and remove equalizer.
4. Remove ball stud from clutch release shaft.
5. Remove release lever and seal. See Figure 4-1.
6. Remove flywheel housing.

7. Remove nylon bushing from flywheel housing. See Figure 4-2.

8. Remove socket head cap screw on clutch release shaft from same hole remove second socket head cap screw (cone point). See Figure 4-2.

9. Pull clutch release shaft out approximately three inches. Slide release yoke, throw-out bearing, woodruff key, and return spring off end of release shaft. Remove release shaft. See Figure 4-2.

10. Mark clutch cover and flywheel with a center punch so that cover can be reinstalled in the same position on the flywheel.

11. Loosen each clutch cover bolt one turn at a time in order to relieve clutch spring pressure evenly, thereby avoid distortion of the cover.

12. Support pressure plate and cover assembly while removing last bolts then, remove cover assembly and driven plate.

b. Lubrication of Clutch

Lubrication of the clutch is required only when the clutch is removed from the car.

NOTE: Before clutch release shaft is installed apply a heavy coat of wheel bearing lubricant where right side of clutch release shaft pilots in flywheel housing.

1. Very sparingly apply wheel bearing lubricant in pilot bushing in crankshaft. If too much lubricant is used, it will run out on face of flywheel when hot and ruin driven plate facings. Make sure that surface of flywheel is clean and dry.

2. Make sure that splines in driven plate hub are clean and apply a light coat of wheel bearing lubricant. Apply a light coat of wheel bearing lubricant on transmission drive gear splines. Slide driven plate over transmission drive gear several times. Remove driven plate and wipe off all excess lubricant pushed-up by hub of plate. Driven plate facings must be kept clean and dry.

3. Fill recess on inside of throw-out bearing with wheel bearing lubricant. Make sure transmission front bearing retainer sleeve is clean and apply a light coat of wheel bearing lubricant. Slide

4-2 CLUTCH

HOLD CLUTCH PEDAL AT FULL RELEASE POSITION, CONTACTING RUBBER BUMPER STOP. ADJUST LOWER RELEASE ROD CLEVIS SO CLEVIS PIN WILL JUST ASSEMBLE IN EQUALIZER OUTER LEVER, WITH ZERO LASH AT CLUTCH PEDAL. SHORTEN LOWER CLUTCH RELEASE ROD ASSEMBLY BY TURNING CLEVIS ON ROD APPROXIMATELY 2 TURNS TO GIVE 5/8 TO 7/8 LASH AT PEDAL.

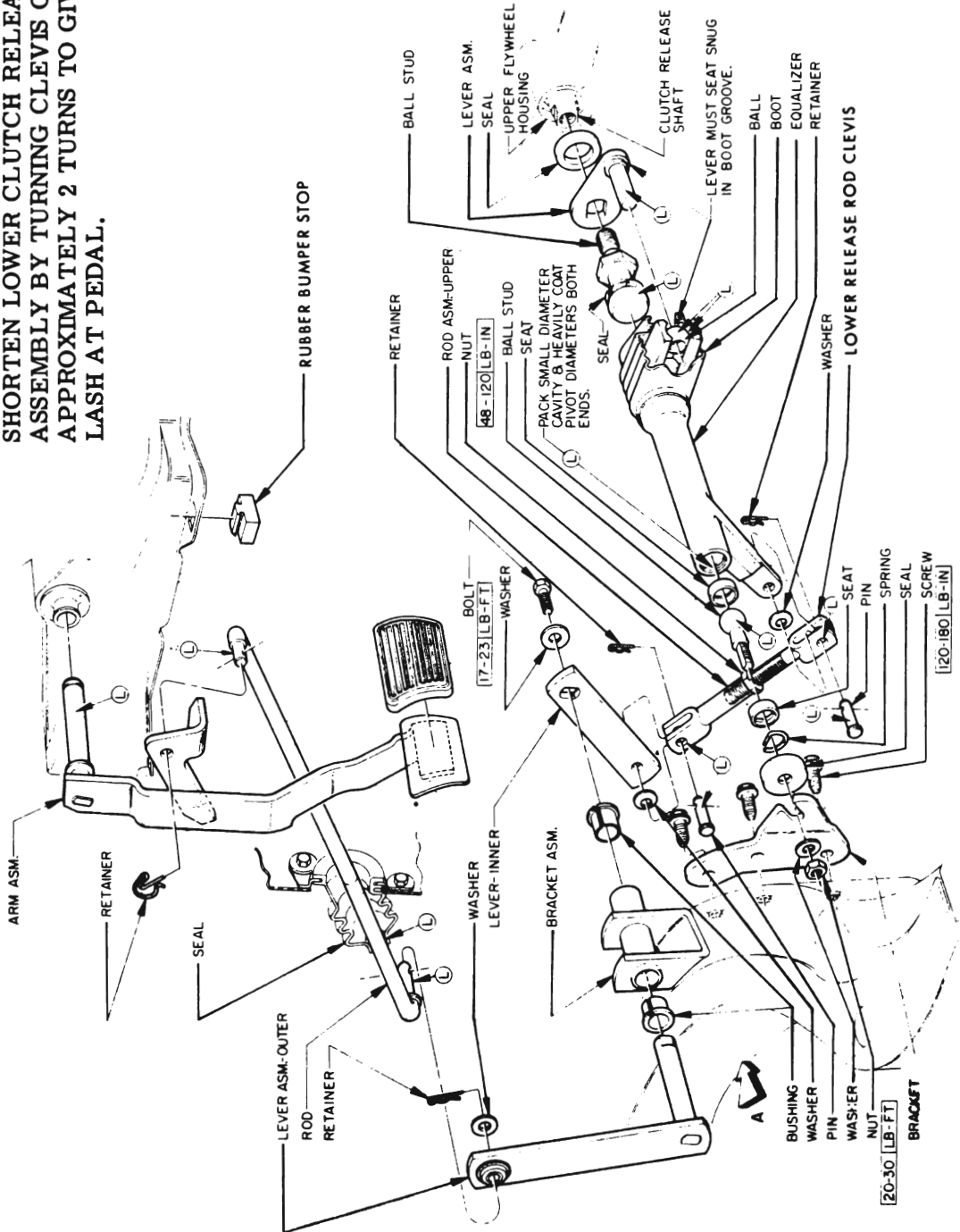


Figure 4-1—Clutch Outer Controls

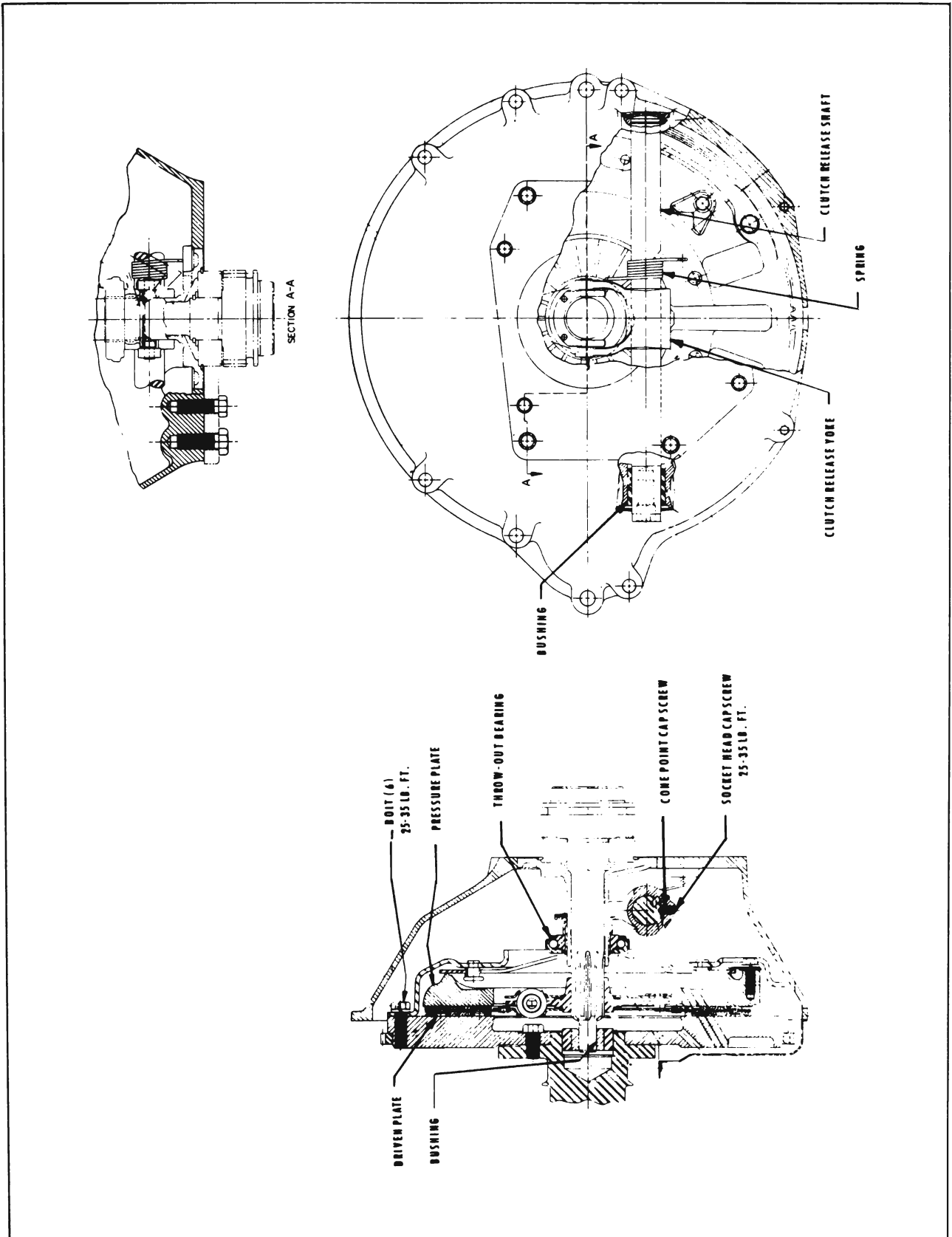


Figure 4-2—Clutch Inner Controls

4-4 CLUTCH

throw-out bearing over transmission retainer several times. Remove throw-out bearing and wipe off all excess lubricant pushed up by hub of bearing.

c. Installation of Clutch

1. Install the pressure plate and driven plate. Support both assemblies with a spare main drive gear.

NOTE: Be sure to align marks on clutch cover with mark made on disassembly.

2. Install clutch release shaft part way into upper flywheel housing and install woodruff key into shaft.

3. Slide clutch release yoke and return spring onto shaft. Before sliding release shaft into bore on right of housing, lubricate with

wheel bearing grease. Slide shaft into place. See Figure 4-2.

4. Install clutch release yoke over woodruff key. Install cone point socket head cap screw first. Install second socket head cap screw. See Figure 4-2.

5. Lubricate inside of nylon bushing and install.

6. Install clutch release seal and lever.

7. Install ball stud to clutch release shaft. See Figure 4-1.

8. Install flywheel housing to cylinder block. Torque bolts to 45-60 lbs. ft.

9. Install clutch equalizer and lubricate as shown in Figure 4-1. Torque nut on frame side of equalizer to 20-30 lbs. ft. See Figure 4-1.

10. Install lower rod assembly to equalizer.

11. Install transmission.

CAUTION: It is very important that guide pins be used to install transmission to avoid damage to clutch driven plate.

12. Adjust clutch lash as described in paragraph 4-2.

4-2 CLUTCH ADJUSTMENT (See Figure 4-1)

1. Disconnect lower rod assembly from equalizer.

2. Hold clutch pedal at full release position, contacting rubber bumper stop.

3. Adjust lower rod assembly so clevis pin will just assemble in equalizer.

4. Shorten lower rod by turning clevis approximately 2 turns, to obtain 5/8" to 7/8" lash at the pedal pad.

4-3 CLUTCH TROUBLE DIAGNOSIS

SYMPTOM AND PROBABLE CAUSE	PROBABLE REMEDY
FAILS TO RELEASE (PEDAL PRESSED TO FLOOR-SHIFT LEVER DOES NOT MOVE FREELY IN AND OUT OF REVERSE GEAR)	
a. Improper linkage adjustment	a. Adjust linkage
b. Improper pedal travel	b. Adjust linkage
c. Loose linkage	c. Replace bushings
d. Faulty pilot bearing	d. Replace bearing
e. Faulty driven disc	e. Replace disc
f. Clutch disc hub binding on clutch gear spline	f. Lubricate if worn replace
SLIPPING	
a. Improper adjustment (no lash)	a. Adjust linkage
b. Oil soaked driven disc	b. Install new disc and correct oil leak at its source.
c. Worn facing or facing torn from disc	c. Replace disc
d. Warped pressure plate or flywheel	d. Replace same
e. Weak diaphragm spring	e. Replace cover assembly

SYMPTOM AND PROBABLE CAUSE	PROBABLE REMEDY
SLIPPING (Cont'd.)	
f. Driven plate not seated in g. Driven plate overheated	f. Make 20-50 normal starts g. Allow to cool—Check lash
GRABBING	
a. Oil on facing or burned or glazed facings b. Worn splines on clutch gear c. Loose engine mountings d. Warped pressure plate or flywheel e. Burned or smeared resin on flywheel or pressure plate	a. Install new disc b. Replace transmission clutch gear c. Tighten or replace mountings d. Replace pressure plate or flywheel e. Sand off if superficial, replace burned or heat checked parts
RATTLING-TRANSMISSION	
a. Oil in driven plate damper b. Driven plate damper spring failure	a. Replace driven disc b. Replace driven disc
THROW-OUT BEARING NOISE WITH CLUTCH FULLY ENGAGED	
a. Improper adjustment b. Throw-out bearing binding on transmission bearing retainer c. Weak linkage return spring	a. Adjust linkage b. Clean, relubricate, check for burrs, nicks, etc. c. Replace spring
NOISY	
a. Worn throw-out bearing	a. Replace bearing
PEDAL STAYS ON FLOOR WHEN DISENGAGED	
a. Bind in linkage b. Weak pedal return spring	a. Lubricate and free up linkage b. Replace
HIGH PEDAL EFFORT	
a. Bind in linkage b. Driven plate worn	a. Lubricate and free up linkage b. Replace driven plate