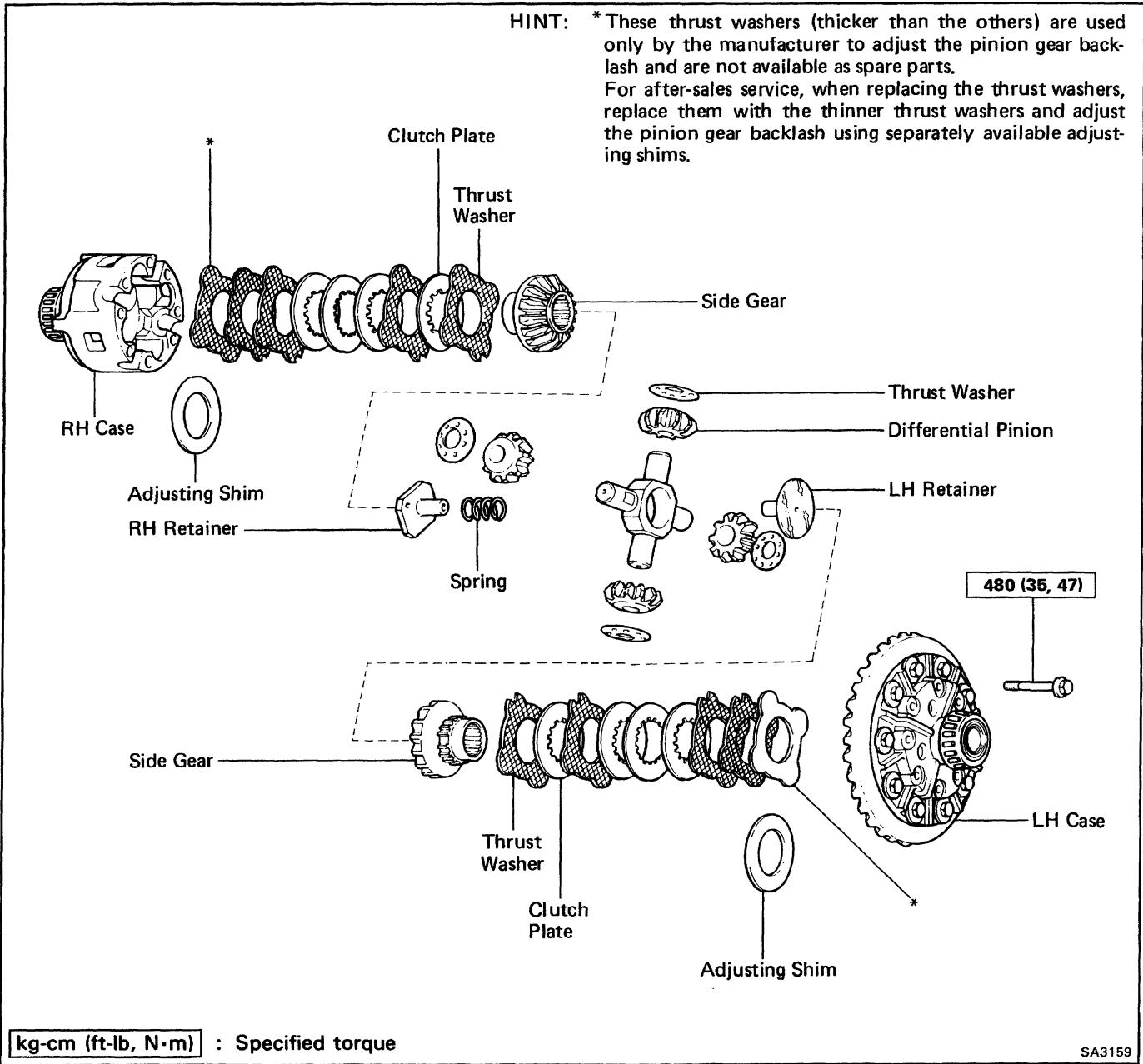


Differential Case (Limited Slip Differential) COMPONENTS

HINT: * These thrust washers (thicker than the others) are used only by the manufacturer to adjust the pinion gear backlash and are not available as spare parts. For after-sales service, when replacing the thrust washers, replace them with the thinner thrust washers and adjust the pinion gear backlash using separately available adjusting shims.

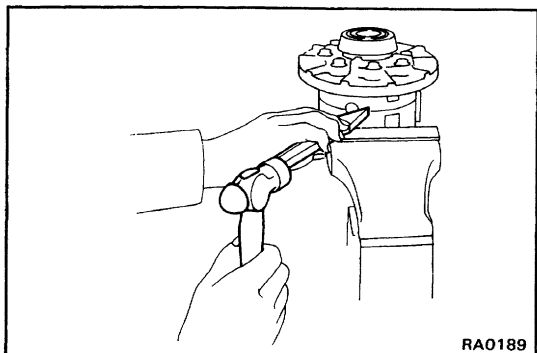


kg-cm (ft-lb, N·m) : Specified torque

SA3159

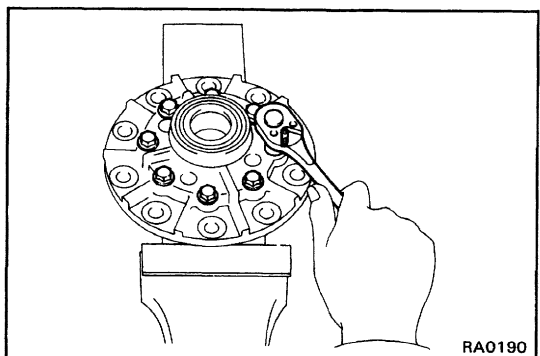
REMOVAL OF DIFFERENTIAL CASE

1. REMOVE DIFFERENTIAL (See page SA-50)
2. REMOVE DIFFERENTIAL CASE FROM CARRIER (See page SA-55)



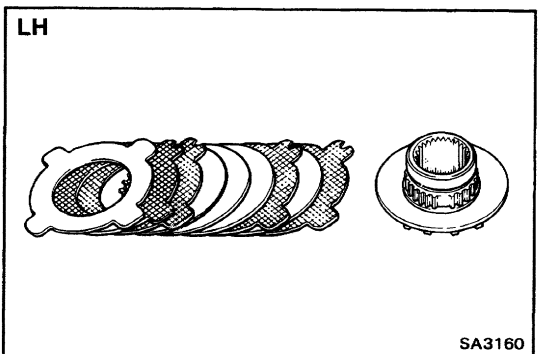
DISASSEMBLY OF LIMITED SLIP DIFFERENTIAL

1. PUT MATCHMARKS ON RH AND LH CASE



2. REMOVE CASE BOLTS AND LH CASE WITH SIDE GEAR

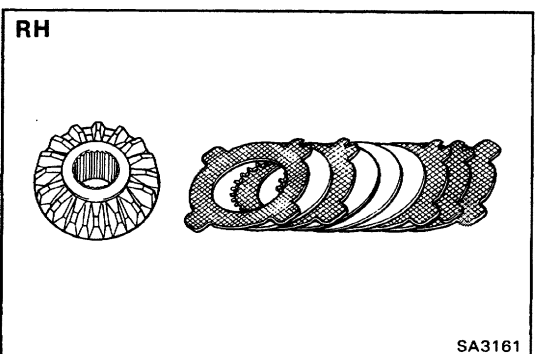
Remove the bolts uniformly and a little at a time.



3. REMOVE FOLLOWING PARTS FROM LH CASE:

- (a) Side gear
- (b) Side gear thrust washer (5 pieces)
- (c) Clutch plate (4 pieces)

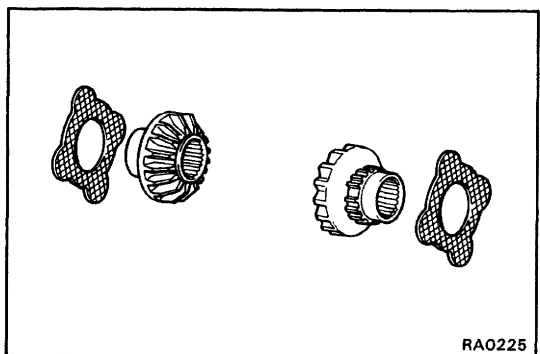
HINT: Keep the disassembled parts in order.



4. REMOVE FOLLOWING PARTS FROM RH CASE:

- (a) Spring LH retainer and spring
- (b) Spider with pinion gear
- (c) Spring RH retainer
- (d) Side gear
- (e) Side gear thrust washer (5 pieces)
- (f) Clutch plate (4 pieces)

HINT: Keep the disassembled parts in order.

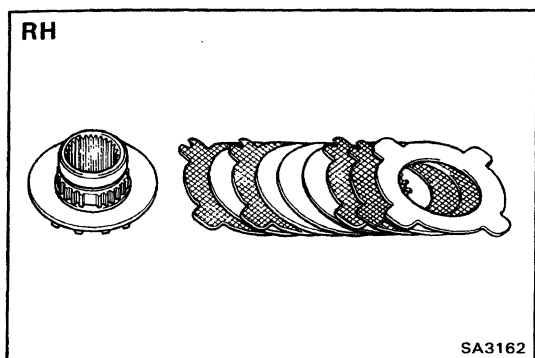


INSPECTION OF COMPONENTS

REPLACE PARTS THAT ARE DAMAGED OR WORN

HINT:

- If replacing the side gear, also replace the thrust washer making contact with it.
- Replace all the thrust washers if replacing one of them.
- Replace all the clutch plates if replacing one of them.



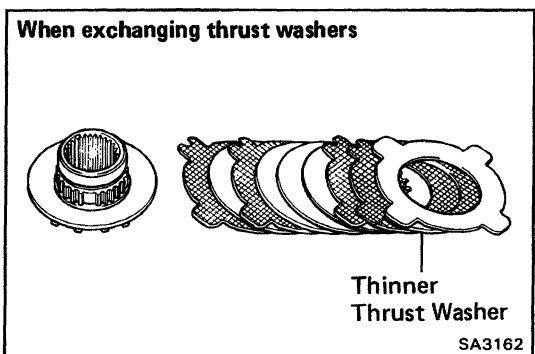
ASSEMBLY OF DIFFERENTIAL CASE

(See page SA-69)

HINT: Apply LSD oil to each component.

1. ASSEMBLE RH CASE

- (a) Install the thrust washers and clutch plates as shown in the figure.



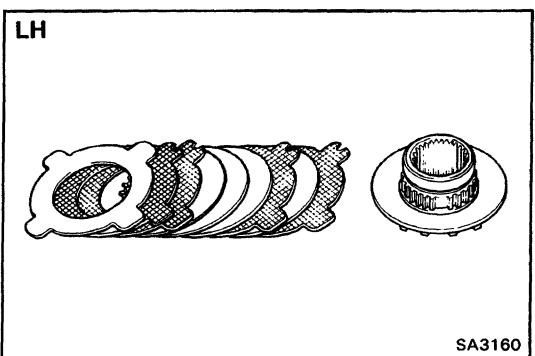
HINT: when exchanging the thrust washers, install in the outer most position a thrust washer which is thinner than the other thrust washers, then use an adjusting shim(s) to adjust the pinion gear backlash.

Thrust washer thickness:

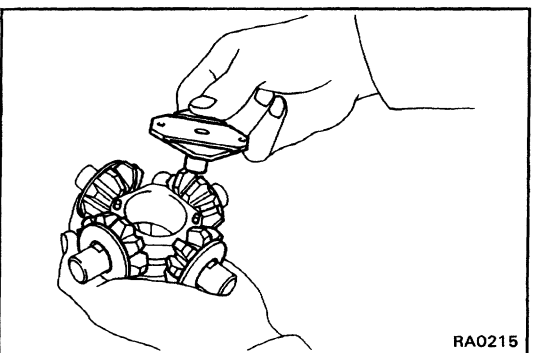
Thinner thrust washer 1.7 mm (0.067 in.)

Other thrust washer 1.8 mm (0.071 in.)

- (b) Install the side gear to the RH case.

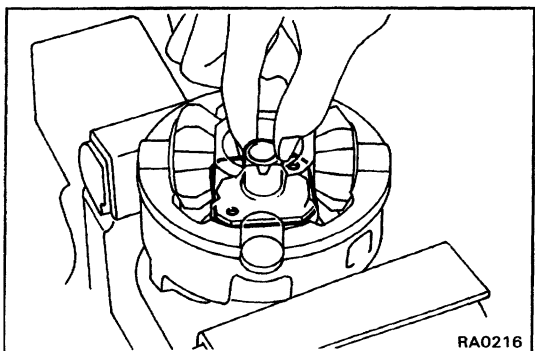


2. ASSEMBLE LH CASE IN SAME PROCEDURE



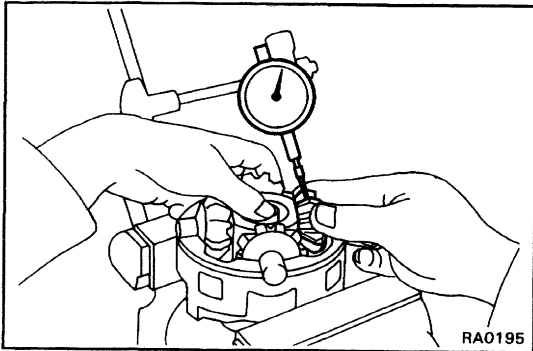
3. INSTALL PINION GEARS, WASHERS AND RH RETAINER TO SPIDER

- (a) Install the pinion gears and washers.
 (b) Align the RH retainer holes with the spider knock pins and install the RH retainer.



4. INSTALL SPIDER TO RH CASE

Check that the RH retainer is securely on the spider pin.

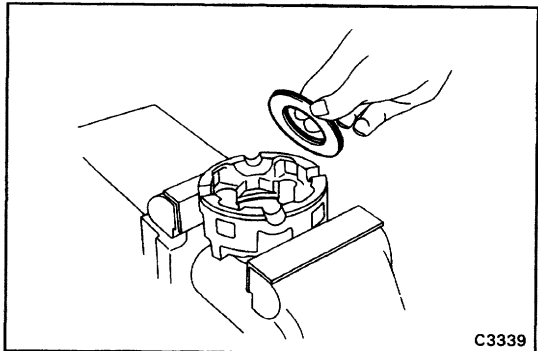


5. MEASURE PINION GEAR BACKLASH

Secure the side gear and measure the backlash while pushing in the spring retainer.

Backlash: 0.05 – 0.20 mm (0.0020 – 0.0079 in.)

HINT: Measure at all four locations.

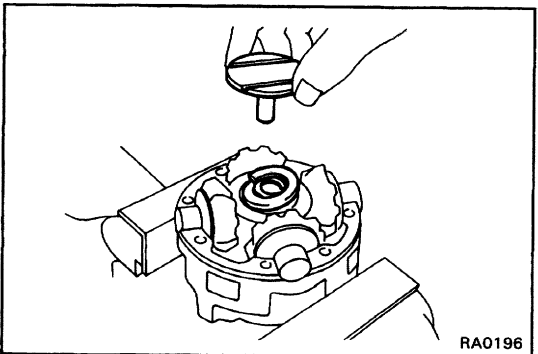


If the backlash is not within specification, select and install an adjusting shim(s).

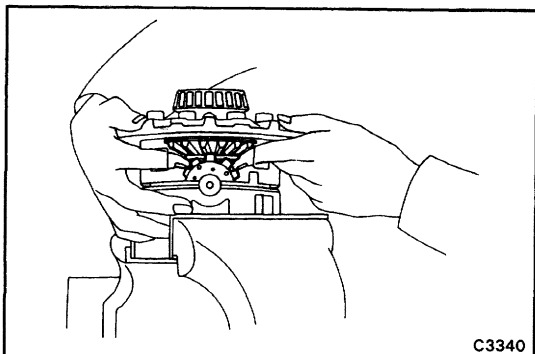
Adjusting shim thickness mm (in.)

Mark	Thickness	Mark	Thickness
A	0.15 (0.0059)	D	0.30 (0.0118)
B	0.20 (0.0079)	E	0.35 (0.0138)
C	0.25 (0.0098)		

6. MEASURE THE LH CASE IN THE SAME MANNER



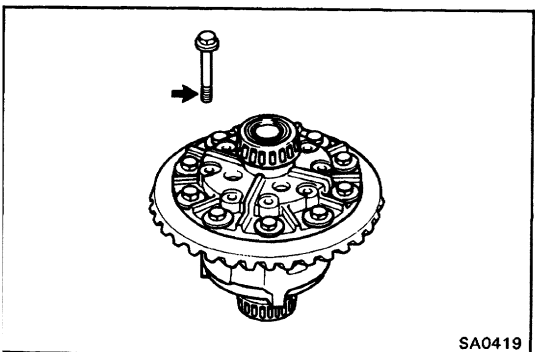
7. INSTALL SPRING AND LH RETAINER



8. ASSEMBLE RH AND LH CASES

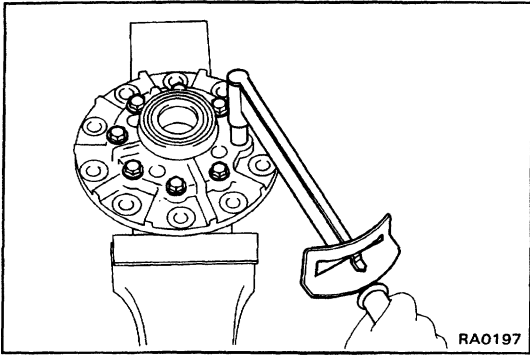
Align the matchmarks and assemble the RH and LH cases.

HINT: Be careful not to drop the side gear, and check the pinion and side gear alignment.



9. INSTALL CASE SET BOLTS

(a) Coat the bolts with gear oil.



(b) Tighten the bolts uniformly and a little at a time.

Torque: 480 kg-cm (35 ft-lb. 47 N-m)

INSTALLATION OF DIFFERENTIAL

1. INSTALL DIFFERENTIAL CASE IN CARRIER

(See page [SA-57](#))

2. INSTALL DIFFERENTIAL

(See page [SA-50](#))