

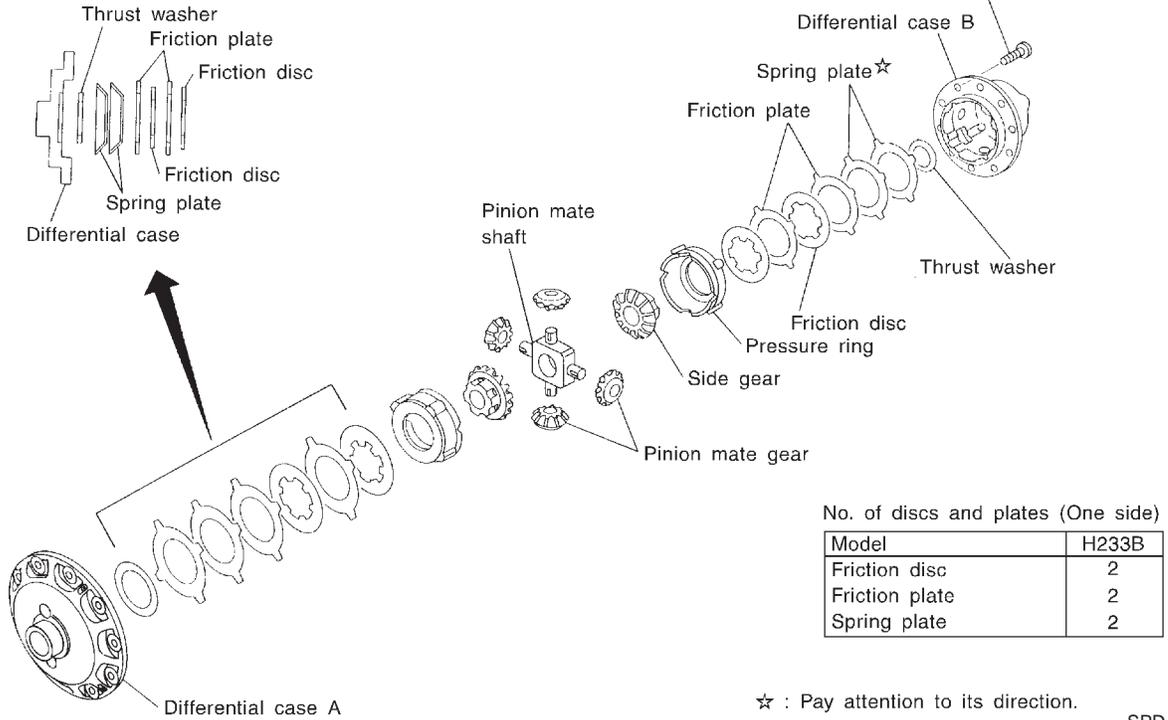
LIMITED SLIP DIFFERENTIAL

H233B SEC. 380

Pay attention to direction of parts and assembly procedures.

Differential case coupling screw
When pressed with a press:

 8 - 11 N•m
(0.8 - 1.1 kg-m, 69 - 95 in-lb)



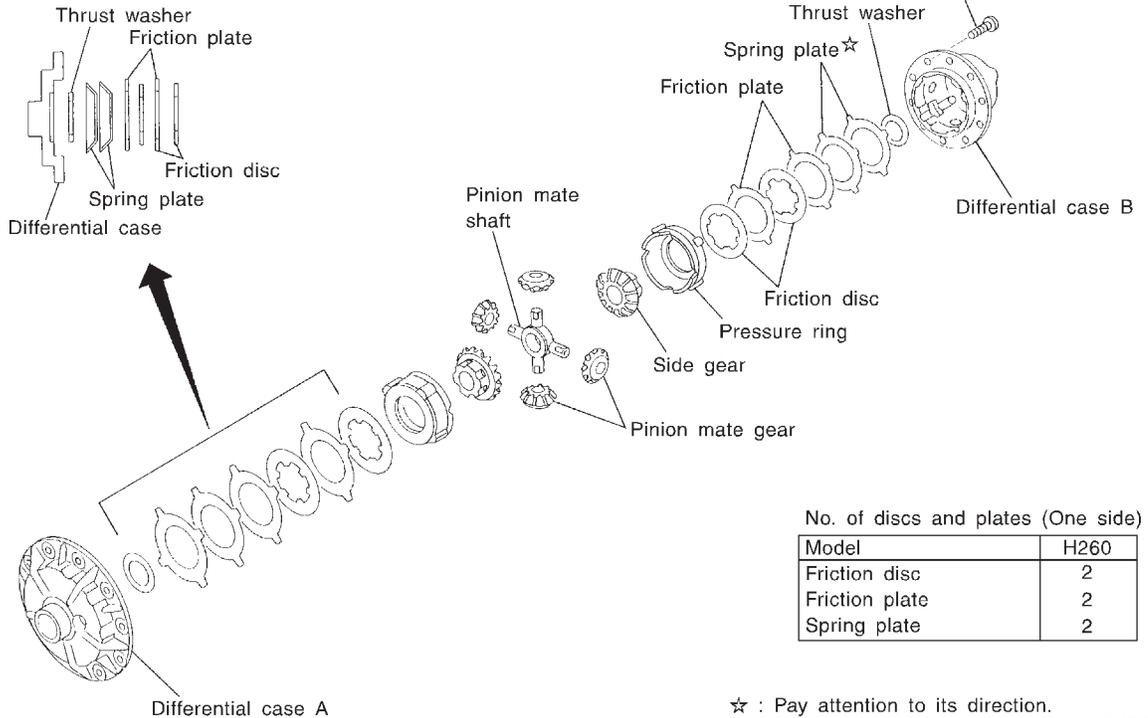
SPD439A

H260 SEC. 380

Pay careful attention to direction of parts and assembly procedures.

Differential case coupling screw
When pressed with a press:

 8 - 11 N•m
(0.8 - 1.1 kg-m, 69 - 95 in-lb)

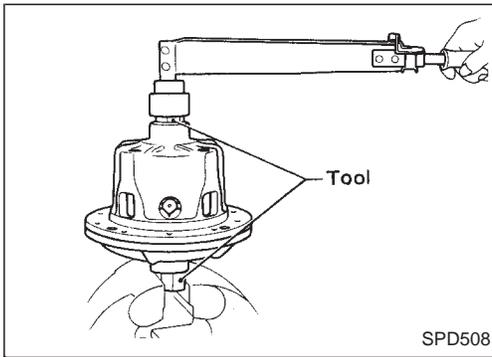


SPD440A

CAUTION:

Do not run engine when one wheel (rear) is off the ground.

LIMITED SLIP DIFFERENTIAL



Preparation for Disassembly

CHECKING DIFFERENTIAL TORQUE

Measure differential torque with Tool.

If it is not within the specifications, inspect components of limited slip differential.

Differential torque:

H233B

108 - 137 N·m (11 - 14 kg·m, 80 - 101 ft·lb)

H260

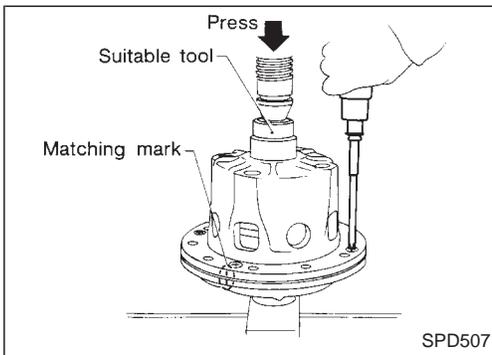
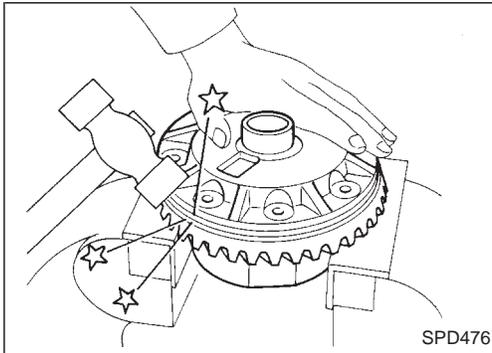
157 - 186 N·m (16 - 19 kg·m, 116 - 137 ft·lb)

Tool number: KV38106400

Disassembly

1. Remove side bearing inner cone with Tool.
2. Loosen ring gear bolts in a criss-cross pattern.
3. Tap ring gear off gear case with a soft hammer.

Tap evenly all around to keep ring gear from binding.



4. Loosen screws on differential cases A and B using a press.
5. Separate differential cases A and B. Draw out component parts (discs and plates, etc.).

Put marks on gears, discs and plates so that they can be reinstalled in their original positions from which they were removed.

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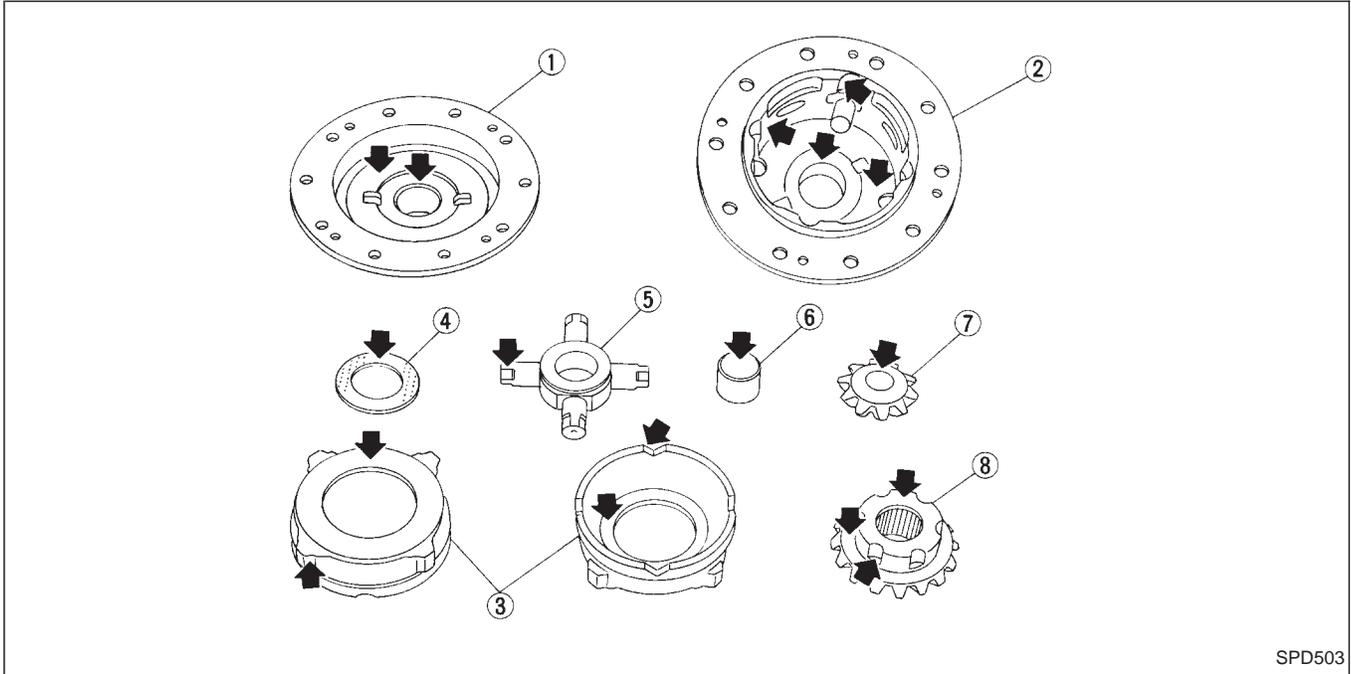
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LIMITED SLIP DIFFERENTIAL

Inspection

CONTACT SURFACES

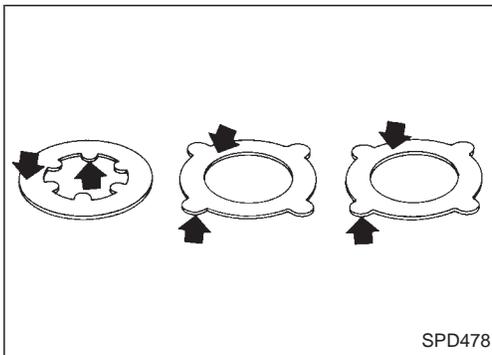
1. Clean the disassembled parts in suitable solvent and blow dry with compressed air.
2. If following surfaces are found with burrs or scratches, smooth with oil stone.



- ① Differential case A
- ② Differential case B
- ③ Pressure ring

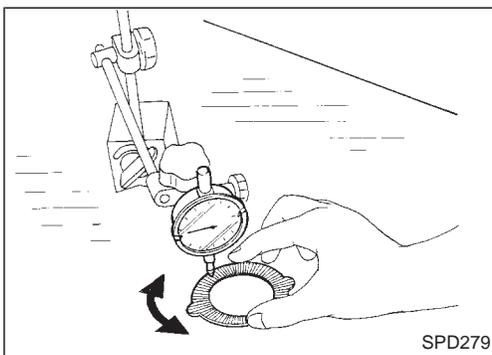
- ④ Thrust washer
- ⑤ Pinion mate shaft
- ⑥ Thrust block

- ⑦ Pinion mate gear
- ⑧ Side gear



DISC AND PLATE

1. Clean the discs and plates in suitable solvent and blow dry with compressed air.
2. Inspect discs and plates for wear, nicks and burrs.



3. To test if friction disc or plate is not distorted, place it on a surface plate and rotate it by hand with indicating finger of dial gauge resting against disc or plate surface.

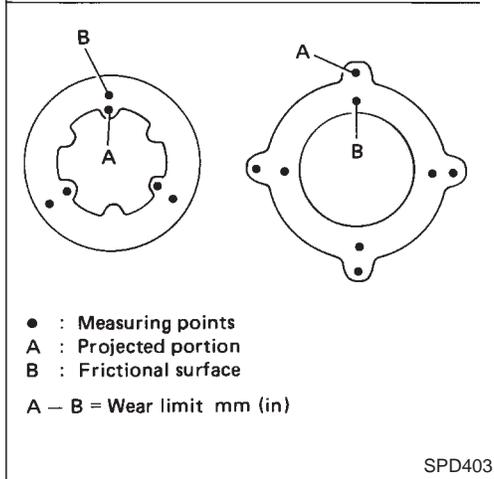
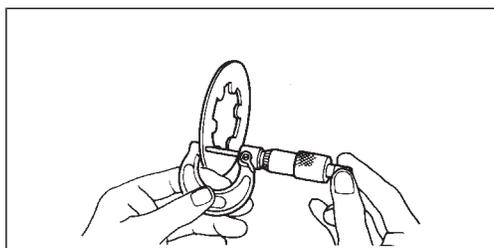
Allowable warpage:

0.08 mm (0.0031 in)

If it exceeds limits, replace with a new plate to eliminate possibility of clutch slippage or sticking.

LIMITED SLIP DIFFERENTIAL

Inspection (Cont'd)



SPD403

4. Measure frictional surfaces and projected portions of friction disc, friction plate, spring plate, and determine each part's differences to see if the specified wear limit has been exceeded. If any part has worn beyond the wear limit, and deformed or fatigued, replace it with a new one that is the same thickness as the projected portion.

Wear limit:

0.1 mm (0.004 in) or less

Adjustment

FRICION DISC AND FRICTION PLATE END PLAY

End play of friction disc and friction plate can be calculated by using following equation and should be adjusted within following range. Adjustment can be made by selecting friction disc having two different thicknesses.

End play E:

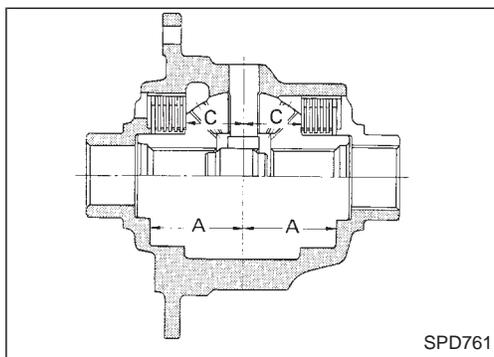
0.05 - 0.15 mm (0.0020 - 0.0059 in)

$E = A - (B + C)$

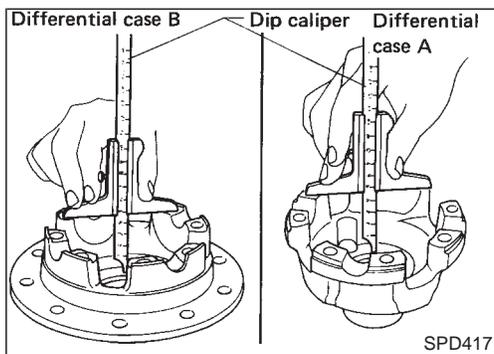
A: Length of differential case contact surface to differential case inner bottom.

B: Total thickness of friction discs, friction plates, spring disc and spring plate in differential case on one side.

C: Length of differential case contact surface to back side of side gear.



SPD761



SPD417

1. Measure values of "A".

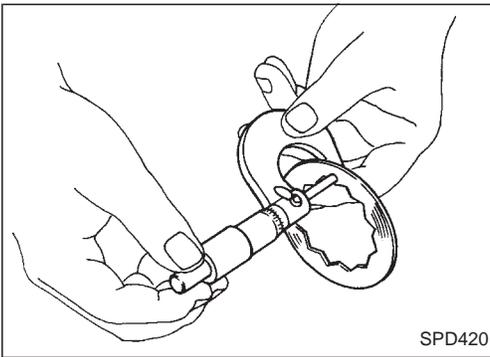
Standard length A:

49.50 - 49.55 mm (1.9488 - 1.9508 in)

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LIMITED SLIP DIFFERENTIAL

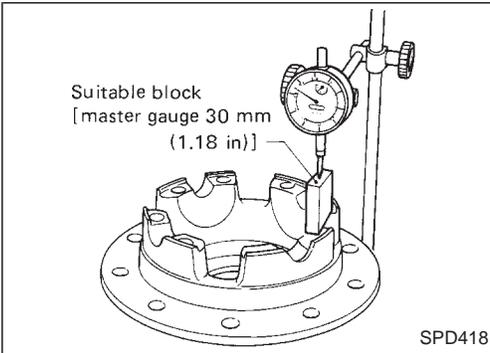
Adjustment (Cont'd)



2. Measure thickness of each disc and plate.

Total thickness "B":

19.24 - 20.26 mm (0.7575 - 0.7976 in)

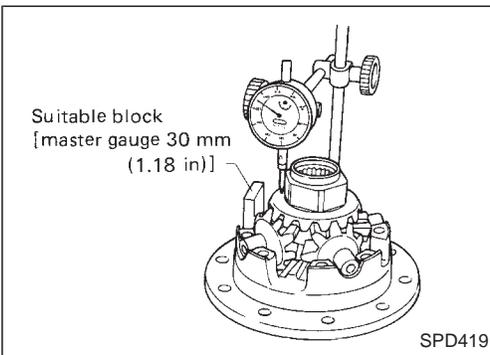


3. Measure values of "C".

(1) Attach a dial indicator to the base plate.

(2) Place differential case B on the base plate, and install a master gauge on case B.

Then adjust the dial indicator scale to zero with its tip on the master gauge.



(3) Install pinion mate gears, side gears and pinion mate shaft in differential case B.

(4) Set dial indicator's tip on the side gear, and read the indication.

Example:

$$E = A - D = A - (B + C) = 0.05 \text{ to } 0.15 \text{ mm}$$

$$A = 49.52 \text{ mm}$$

$$B = 19.45 \text{ mm}$$

$$C = 29.7 \text{ mm}$$

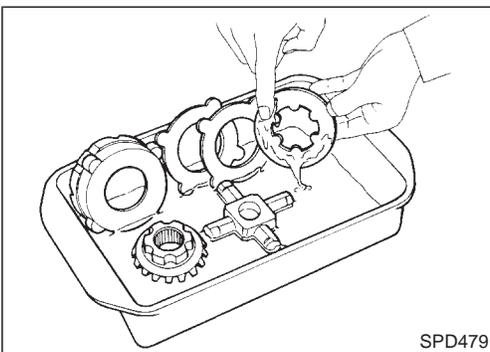
$$D = B + C$$

$$E = A - D$$

B 19.45	A 49.52
+C 29.7	-D 49.15
49.15	0.37

From the above equation, end play of 0.37 mm exceeds the specified range of 0.05 to 0.15 mm.

Select suitable discs and plates to adjust correctly.



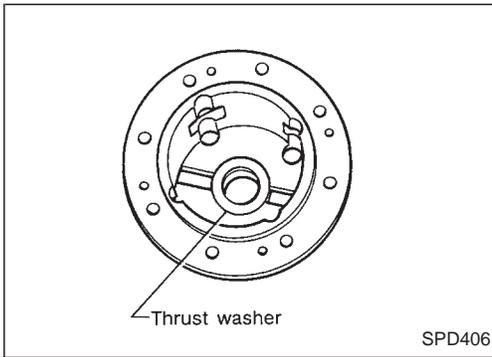
Assembly

Assemble differential case in the reverse order of disassembly, observing the following.

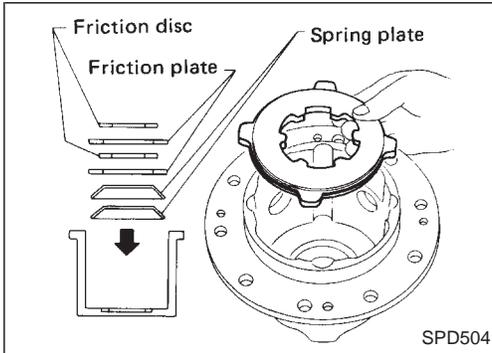
1. As an aid to installation, apply sufficient amounts of recommended limited slip differential gear oil (refer to MA section) to the faces of pressure rings, discs and plates to be assembled together.

LIMITED SLIP DIFFERENTIAL

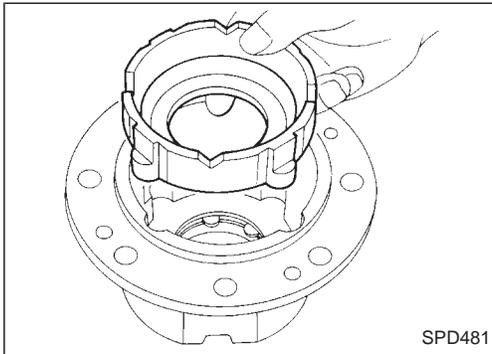
Assembly (Cont'd)



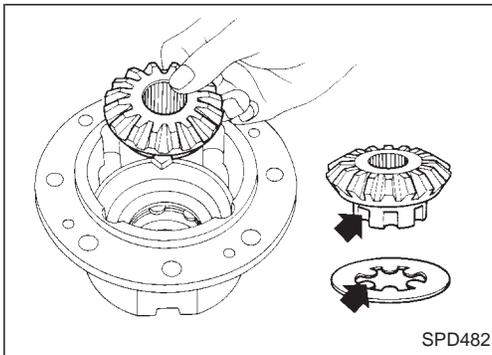
2. Place differential case B on a level surface, then install thrust washer.



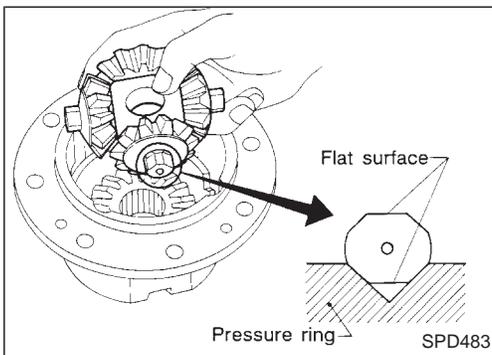
3. Install spring plates, friction plates and friction discs. **Pay particular attention to the direction of clutch plates and their assembly sequence.**



4. Install pressure ring.



5. Install side gear by inserting projected portion of disc.

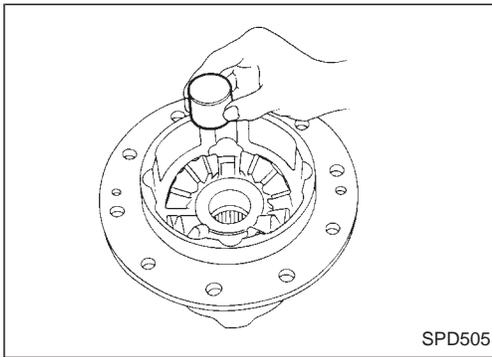


6. Install pinion mate gears and shaft. **Always attach pinion mate shaft to "V" groove in pressure ring with flat surfaces facing up and down.**

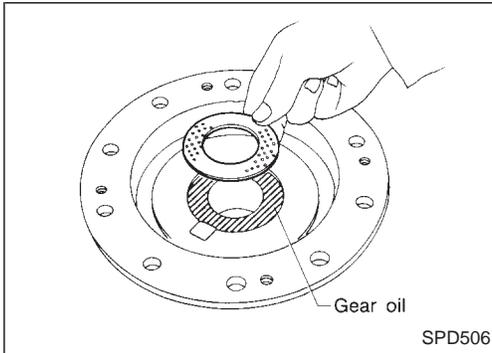
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LIMITED SLIP DIFFERENTIAL

Assembly (Cont'd)

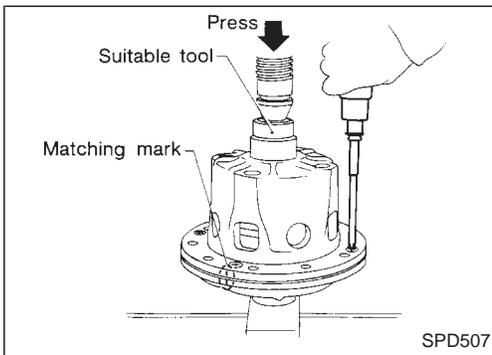


7. Install thrust block.



8. Install differential case A side components in the opposite way of differential case B components.

9. Apply gear oil to differential case A, and attach thrust washer to it.



10. Install differential case A on differential case B. Align the matching marks on the cases, then install screws while pushing differential case down using a press.

Press force:

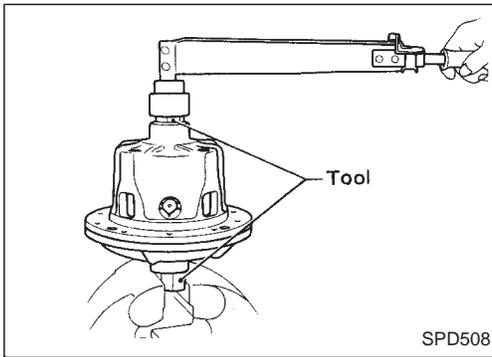
7,846 N (800 kg, 1,764 lb)

11. After all parts have been assembled, check and adjust the following:

LIMITED SLIP DIFFERENTIAL

Assembly (Cont'd)

DIFFERENTIAL TORQUE INSPECTION



- Place side gear in a vise with Tool into the gear splines.
- Turn side gear several times, then measure the differential torque after side gear begins to rotate in order to determine whether it is within the specified range. If it is not, adjust it by selecting a friction disc. (Refer to SDS for adjustment parts.)

Differential torque:

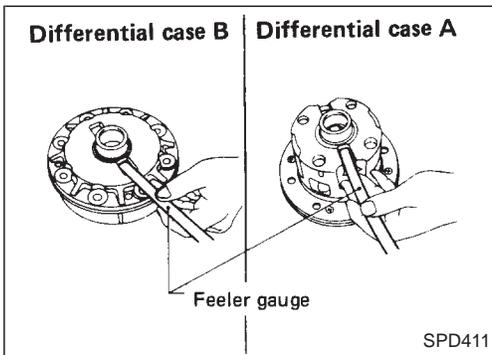
H233B

108 - 137 N·m (11 - 14 kg-m, 80 - 101 ft-lb)

H260

157 - 186 N·m (16 - 19 kg-m, 116 - 137 ft-lb)

Tool number: KV38106400



SIDE GEAR BACKLASH INSPECTION

Check backlash of side gear on both sides. Using a feeler gauge, measure clearance between side gear and thrust washer. If it is not within specifications, adjust it by selecting a thrust washer. (Refer to SDS.)

Side gear backlash:

Differential case A side

0.05 - 0.20 mm (0.0020 - 0.0079 in)

Differential case B side

0.05 - 0.20 mm (0.0020 - 0.0079 in)

- After checking and adjusting, tighten ring gear bolts in a criss-cross fashion.
- Bend up lock straps to lock bolts in place.
- Install side bearing inner race with Tool.

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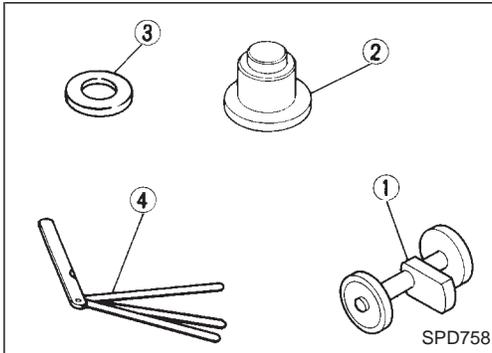
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ADJUSTMENT

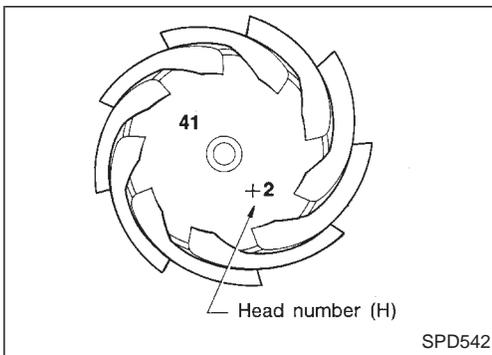
To avoid confusion while calculating bearing shims, it is absolutely necessary to stay with the metric system. If you measure anything in inches, **the results must be converted to the metric system.**



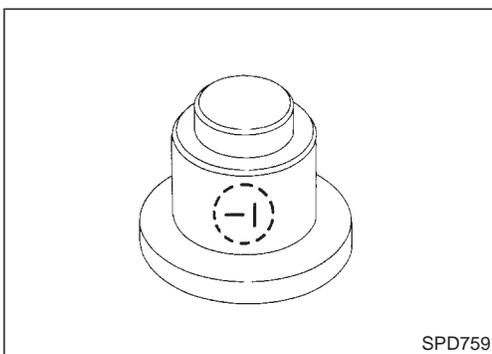
Drive Pinion Height

- First prepare Tools for pinion height adjustment.
 H233B: ① Height gauge (ST31251000)
 ② Dummy shaft (ST31181001)
 ③ Spacer [thickness: 2.50 mm (0.0984 in)]
 ④ Feeler gauge
 H260: ① Height gauge (ST31130000)
 ② Dummy shaft (ST31241000)
 ④ Feeler gauge
- To simplify the job, make a chart, like the one below, to organize your calculations.

LETTERS	HUNDREDTHS OF A MILLIMETER
H: Head number	
D': Figure marked on dummy shaft	
S: Figure marked on height gauge	
N: Measuring clearance	



- Write the following numbers down the chart.
 H: Head number

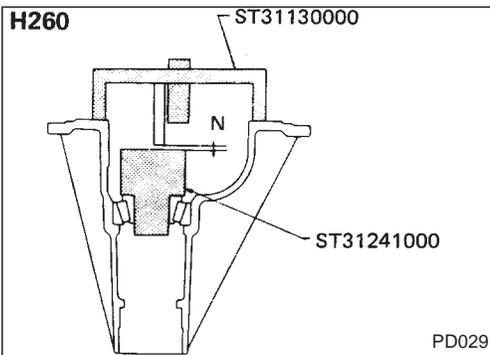
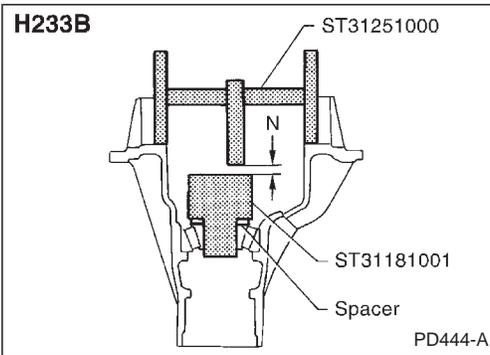
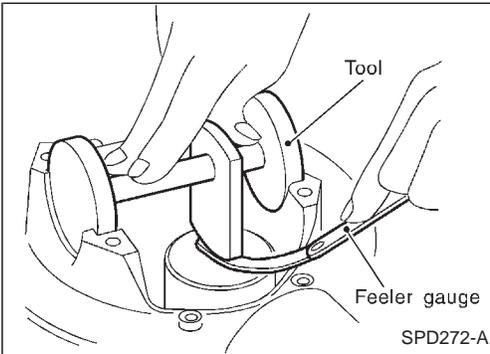
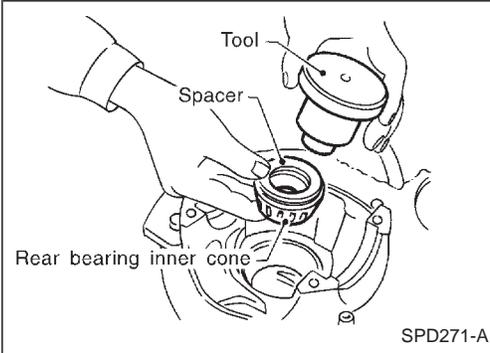
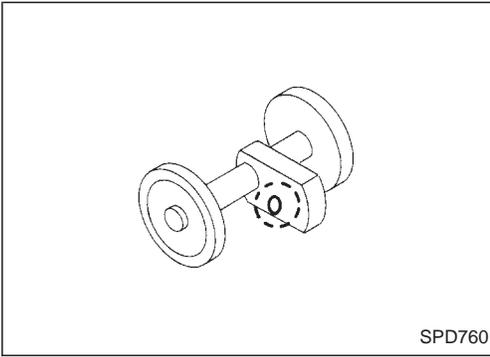


D': Figure marked on dummy shaft.

ADJUSTMENT

Drive Pinion Height (Cont'd)

S: Figure marked on height gauge.



4. Place pinion rear bearing inner cone and Tools on gear carrier.

Tool number:

H233B ST31181001

H260 ST31241000

5. Attach Tool (Height gauge) to gear carrier, and measure the clearance between the height gauge tip and the dummy shaft face.

Tool number:

H233B ST31251000

H260 ST31130000

6. Substitute these values into the equation to calculate the thickness of the washer.

If values signifying H, D' and S are not given, regard them as zero and calculate.

H233B:

T (Thickness of washer)

$$= N - [(H - D' - S) \times 0.01] + 3.05$$

H260:

T (Thickness of washer)

$$= N - [(H - D' - S) \times 0.01] + 2.55$$

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ADJUSTMENT

Drive Pinion Height (Cont'd)

Example (H233B):

$$N = 0.30$$

$$H = 2$$

$$D' = -1$$

$$S = 0$$

$$T = N - [(H - D' - S) \times 0.01] + 3.05$$

$$= 0.30 - [(2 - (-1) - 0) \times 0.01] + 3.05$$

(1)	H	2	
	-D'	-(-1)	
		3	
		3	
	-S	-0	
		3	
(2)		3	
		x 0.01	
		0.03	
(3)	N	0.30	
		-0.03	
		0.27	
(4)		0.27	
		+3.05	
		3.32	
		∴ T = 3.32	

7. Select the proper pinion height washer.

Drive pinion height adjusting washer:

Refer to SDS (PD-57, 56).

If you cannot find the desired thickness of washer, use washer with thickness closest to the calculated value.

Example (H233B):

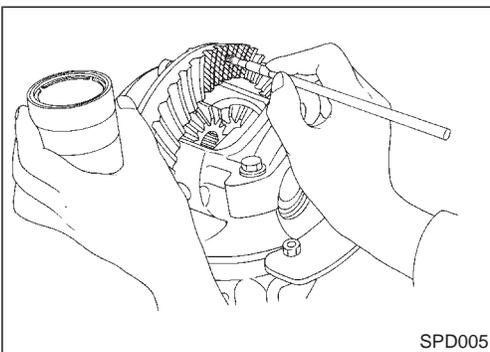
Calculated value ... T = 3.32 mm

Used washer ... T = 3.33 mm

Tooth Contact

Gear tooth contact pattern check is necessary to verify correct relationship between ring gear and drive pinion.

Hypoid gear sets which are not positioned properly in relation to one another may be noisy, or have short life or both. With a pattern check, the most desirable contact for low noise level and long life can be assured.

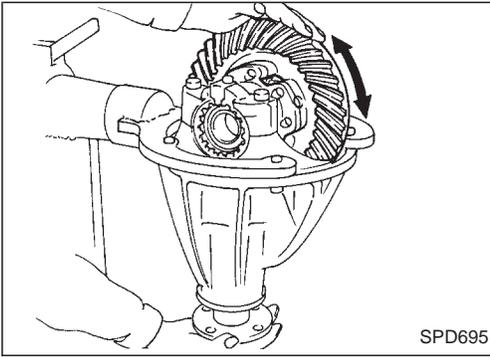


1. Thoroughly clean ring gear and drive pinion teeth.
2. Sparingly apply a mixture of powdered ferric oxide and oil or equivalent to 3 or 4 teeth of ring gear drive side.

ADJUSTMENT

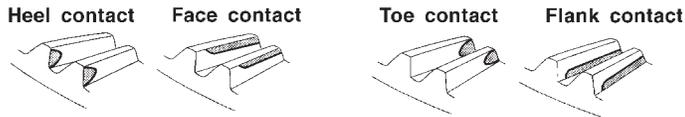
Tooth Contact (Cont'd)

3. Hold companion flange steady by hand and rotate the ring gear in both directions.



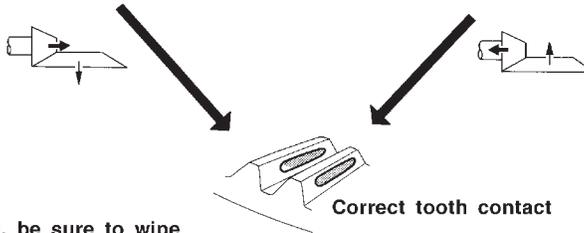
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Usually the pattern will be correct if shims are correctly calculated and the backlash is correct. However, in rare cases, trial and error processes may be employed to obtain a correct pattern. The tooth pattern is the best indication of how well a differential has been set up.



To correct, increase thickness of pinion height adjusting washer in order to bring drive pinion close to ring gear.

To correct, reduce thickness of pinion height adjusting washer in order to make drive pinion go away from ring gear.



When adjustment is completed, be sure to wipe off completely the ferric oxide and oil or their equivalent.

SPD007-B

ASSEMBLY

Differential Case — 4-pinion type —

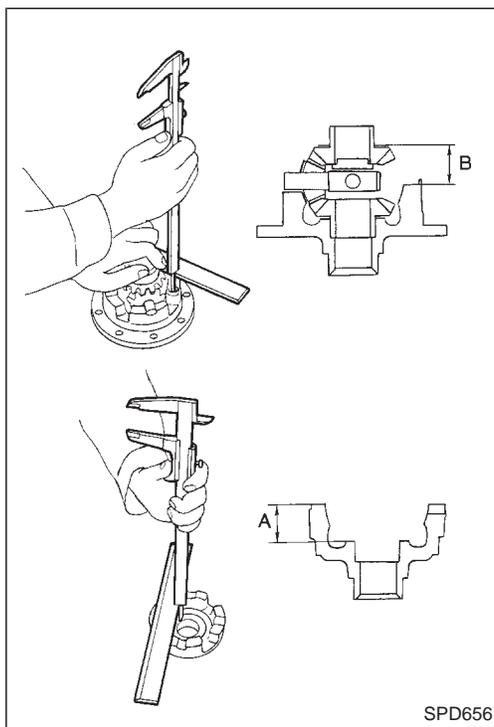
1. Measure clearance between side gear thrust washer and differential case.

Clearance between side gear thrust washer and differential case (A — B):

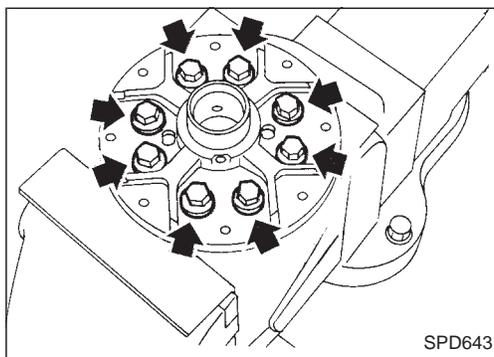
0.15 - 0.20 mm (0.0059 - 0.0079 in)

The clearance can be adjusted with side gear thrust washer. Refer to SDS.

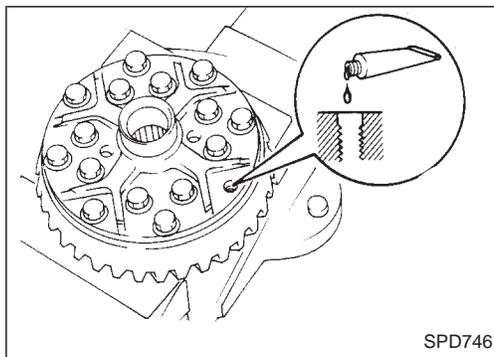
2. Apply oil to gear tooth surfaces and thrust surfaces and check that they turn properly.



3. Install differential case LH and RH.



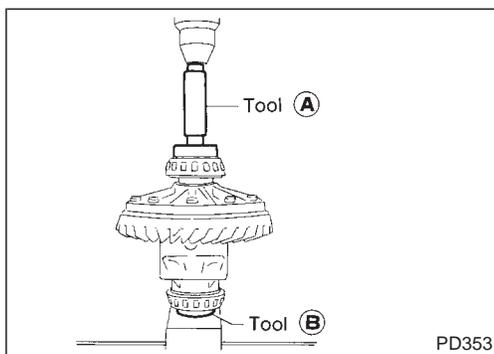
4. Place differential case on ring gear.
5. Apply locking sealer to ring gear bolts, and install them. **Tighten bolts in a criss-cross fashion, lightly tapping bolt head with a hammer.**



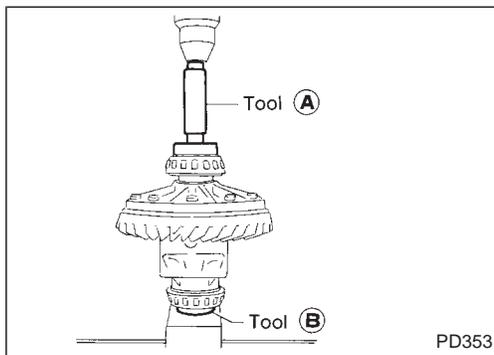
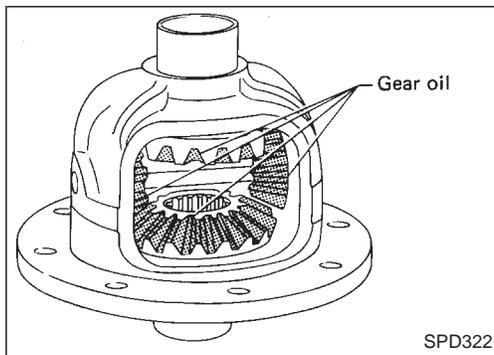
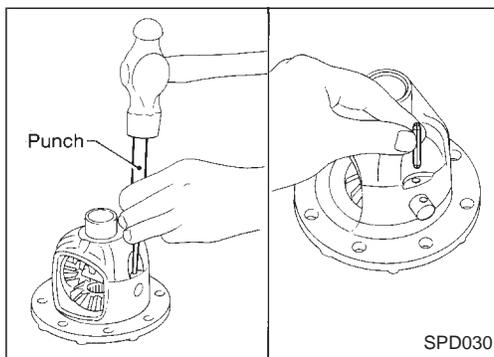
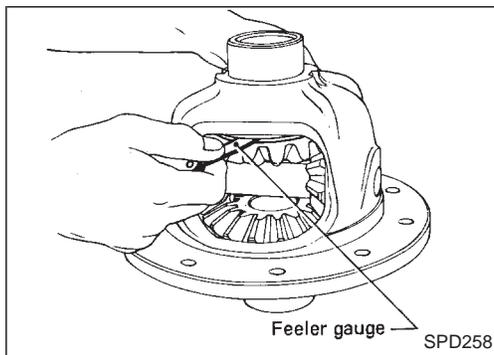
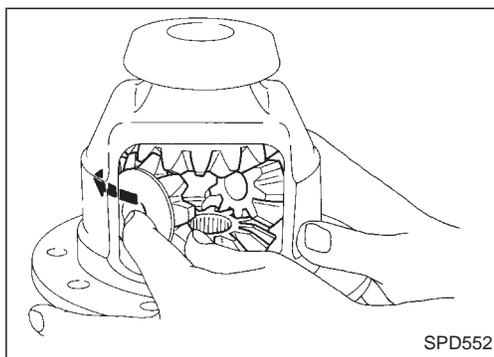
6. Press-fit side bearing inner races on differential case with Tool.

Tool number:

- | | |
|---------|------------|
| Ⓐ H233B | ST33190000 |
| H260 | Drift |
| Ⓑ H233B | ST02371000 |
| H260 | Drift |



ASSEMBLY



Differential Case — 2-pinion type —

1. Install side gears, pinion mate gears and thrust washers into differential case.

2. Fit pinion mate shaft to differential case so that it meets lock pin holes.

3. Adjust backlash between side gear and pinion mate gear by selecting side gear thrust washer. Refer to SDS.

**Backlash between side gear and pinion mate gear
(Clearance between side gear thrust washer and differential case):**

0.15 - 0.20 mm (0.0059 - 0.0079 in)

4. Install pinion mate shaft lock pin with a punch.
Make sure lock pin is flush with case.

5. Apply gear oil to gear tooth surfaces and thrust surfaces and make sure they turn properly.

6. Install differential case assembly on ring gear.
Tighten bolts in a criss-cross pattern, lightly tapping bolt head with a hammer.

7. Press-fit side bearing inner cones on differential case with Tool.

Tool number:

(A) ST33190000

(B) ST02371000

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ASSEMBLY

Differential Carrier

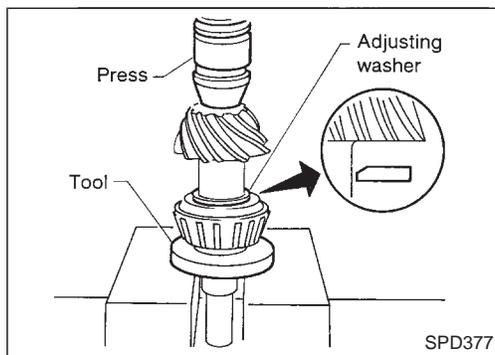
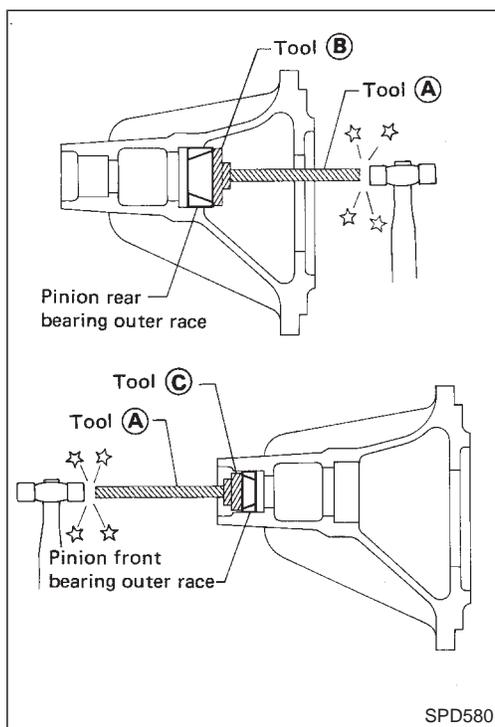
1. Press-fit front and rear bearing outer races with Tools.

Tool number:

- Ⓐ ST30611000
- Ⓑ ST30621000 (front differential)
or suitable pipe
- Ⓒ ST30701000 (H233B)
For H260, use suitable pipe.

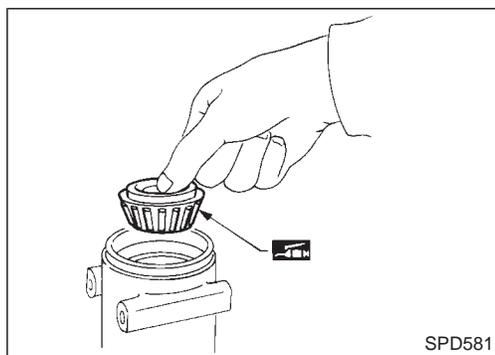
CAUTION:

Do not damage roller side face.

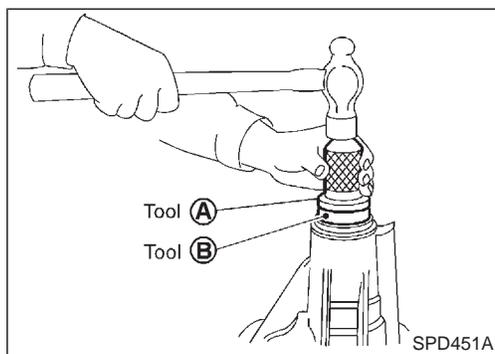


2. Select drive pinion height adjusting washer. Refer to ADJUSTMENT (PD-30).
3. Install drive pinion height adjusting washer in drive pinion, and press-fit pinion rear bearing inner cone in it, with press and Tool.

Tool number: ST30911000



4. Place pinion front bearing inner cone in gear carrier.



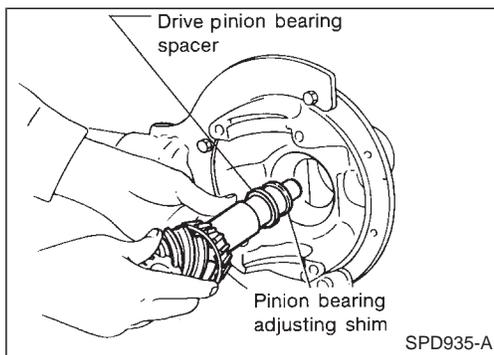
5. Apply multi-purpose grease to cavity at sealing lips of oil seal. Install front oil seal.

Tool number:

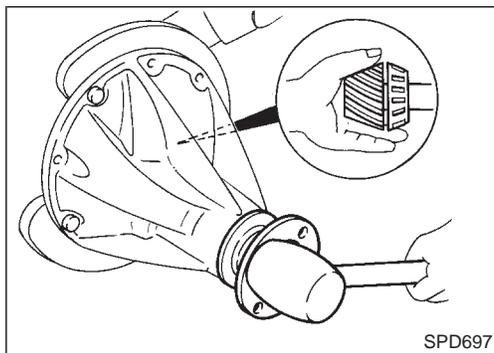
- Ⓐ ST30720000
- Ⓑ KV38102510

ASSEMBLY

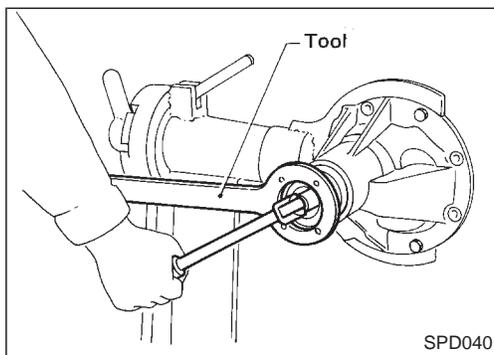
Differential Carrier (Cont'd)



6. Install drive pinion bearing spacer, pinion bearing adjusting shim and drive pinion in gear carrier.

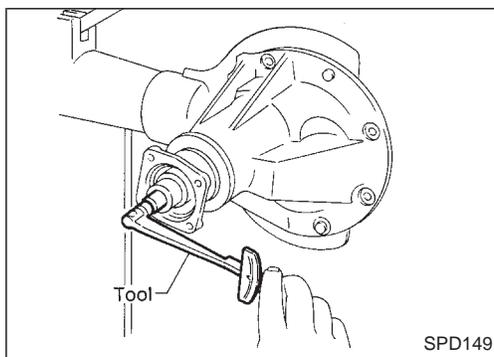


7. Insert companion flange into drive pinion by tapping the companion flange with a soft hammer.



8. Tighten pinion nut to the specified torque.
The threaded portion of drive pinion and pinion nut should be free from oil or grease.

Tool number: KV38104700



9. Turn drive pinion in both directions several times, and measure pinion bearing preload.

Tool number: ST3127S000

Pinion bearing preload (with front oil seal):

1.4 - 1.7 N·m (14 - 17 kg-cm, 12 - 15 in-lb)

If preload is out of specification, adjust the thickness of spacer and shim combination by replacing shim and spacer with thinner one.

- Start from the combination of thickest spacer and shim.
- Combine each spacer and shim thickness one by one until the correct specification are achieved.

Drive pinion bearing preload adjusting spacer and shim:

Refer to SDS (PD-56, 57).

GI

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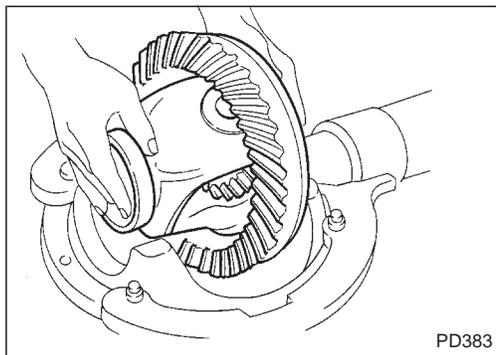
EL

SE

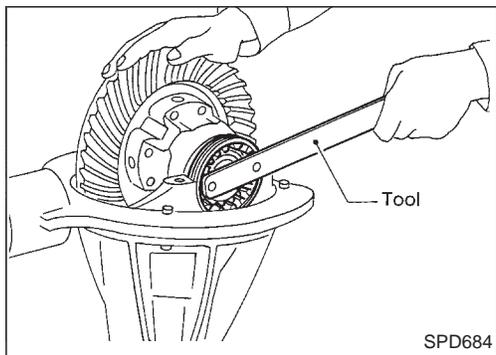
IDX

ASSEMBLY

Differential Carrier (Cont'd)



10. Install differential case assembly with side bearing outer races into gear carrier.

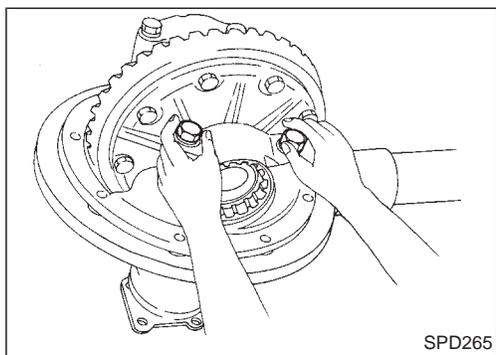


11. Position side bearing adjusters on gear carrier with threads properly engaged; screw in adjusters lightly at this stage of assembly.

Tool number:

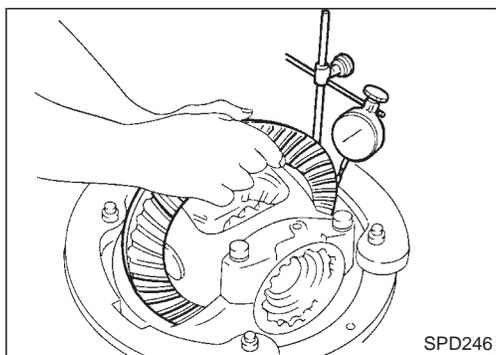
H233B ST32580000

H260 ST32530000



12. Align mark on bearing cap with that on gear carrier and install bearing cap on gear carrier.

- Do not tighten at this point to allow further tightening of side bearing adjusters.



13. Tighten both right and left side bearing adjusters alternately and measure ring gear backlash and total preload at the same time. Adjust right and left side bearing adjusters by tightening them alternately so that proper ring gear backlash and total preload can be obtained.

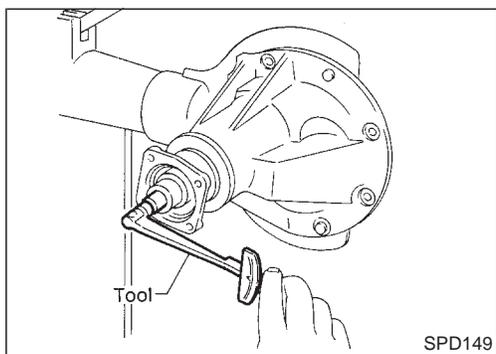
Ring gear-to-drive pinion backlash:

H233B

0.15 - 0.20 mm (0.0059 - 0.0079 in)

H260

0.18 - 0.23 mm (0.0071 - 0.0091 in)



- When checking preload, turn drive pinion in both directions several times to set bearing rollers.

Tool number: ST3127S000

Total preload (with front oil seal):

Drive pinion bearing

New parts

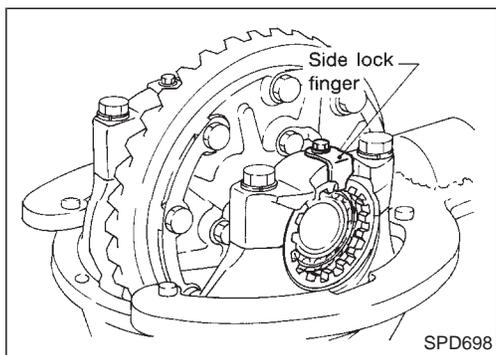
1.7 - 2.5 N·m (17 - 25 kg-cm, 15 - 22 in-lb)

Used parts

1.5 - 1.7 N·m (15 - 17 kg-cm, 13 - 15 in-lb)

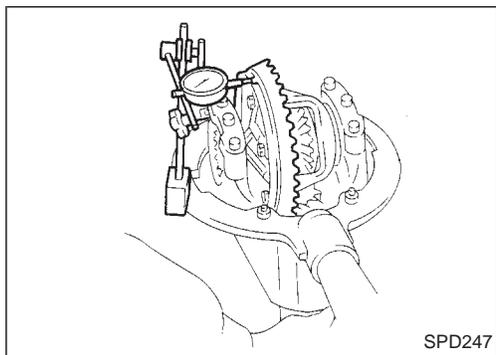
ASSEMBLY

Differential Carrier (Cont'd)



14. Tighten side bearing cap bolts.

15. Install side lock finger in place to prevent rotation during operation.



16. Check runout of ring gear with a dial indicator.

Runout limit: 0.08 mm (0.0031 in)

- If backlash varies excessively in different places, the variance may have resulted from foreign matter caught between the ring gear and the differential case.
- If the backlash varies greatly when the runout of the ring gear is within a specified range, the hypoid gear set or differential case should be replaced.

17. Check tooth contact. Refer to ADJUSTMENT (PD-30).

GI

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SE

IDX

SERVICE DATA AND SPECIFICATIONS (SDS)

Propeller Shaft

GENERAL SPECIFICATIONS

Front propeller shaft

Applied model	Except for RD28 Engine MT models	RD28 Engine MT models
Propeller shaft model	2F80B	
Number of joints	2	
Type of journal bearing	Solid (Disassembly type)	
Coupling type with transmission	Flange type	
Distance between yokes mm (in)	73 (2.87)	
Shaft length (Spider-to-spider) mm (in)	810 (31.89)	832 (32.76)
Shaft outer diameter mm (in)	50.8 (2.000)	

Rear propeller shaft

Applied model	TB45			TD42	TB42		RD28		
Engine	TB45			TD42	TB42		RD28		
Transmission	M/T	A/T	M/T	M/T	M/T	M/T	A/T	A/T	M/T
Body	Wagon				Hardtop		Wagon	Hardtop	Wagon
Propeller shaft model	2F100H						2F80B		
Number of joints	2								
Type of journal bearing	Solid (Disassembly type)								
Coupling type with transmission	Flange type								
Distance between yokes mm (in)	94 (3.70)	94 (3.70)		94 (3.70)	94 (3.70)	94 (3.70)	73 (2.87)	73 (2.87)	73 (2.87)
Shaft length (Spider-to-spider) mm (in)	970 (38.19)	1,025 (40.35)		1,025 (40.35)	460 (18.11)	440 (17.32)	1,055 (41.54)	490 (19.29)	1,033 (40.67)
Shaft outer diameter mm (in)	89.6 (3.528)	90 (3.54)		89.6 (3.528)	75.2 (2.961)	57 (2.24)	89.6 (3.528)	89.6 (3.528)	89.6 (3.528)

INSPECTION AND ADJUSTMENT

Service data

Propeller shaft model	2F80B, 2F100H	
Propeller shaft runout limit mm (in)	0.6 (0.024)	
Journal axial play mm (in)	0.02 (0.0008)	

Available snap rings

2F80B

Thickness mm (in)	Color	Part number
1.99 (0.0783)	White	37146-C9400
2.02 (0.0795)	Yellow	37147-C9400
2.05 (0.0807)	Red	37148-C9400
2.08 (0.0819)	Green	37149-C9400
2.11 (0.0831)	Blue	37150-C9400
2.14 (0.0843)	Light brown	37151-C9400
2.17 (0.0854)	Black	37152-C9400
2.20 (0.0866)	Black	37153-C9400

SERVICE DATA AND SPECIFICATIONS (SDS)

Propeller Shaft (Cont'd)

2F100H

Thickness mm (in)	Color	Part number
1.95 (0.0768)	White	37146-61502
1.98 (0.0780)	Yellow	37147-61502
2.01 (0.0791)	Red	37148-61502
2.04 (0.0803)	Green	37149-61502
2.07 (0.0815)	Blue	37150-61502
2.10 (0.0827)	Light Brown	37151-61502
2.13 (0.0839)	Pink	37146-61503
2.16 (0.0850)	Gold	37147-61503
2.19 (0.0862)	Black	37148-61503
2.22 (0.0874)	Color less	37149-61503

Final Drive

GENERAL SPECIFICATIONS

Body type	Wagon						Hardtop							
Engine	RD28ETi	TD42	TB42S	TB45E			RD28ETi	TB42S						
Transmission	M/T						A/T			M/T				
Front final drive	Standard													
	H233B													
	2-pinion													
Gear ratio	4.625		4.111			3.900		4.625		4.111				
Number of teeth (Ring gear/drive pinion)	37/8		37/9			39/10		37/8		37/9				
Oil capacity (Approx.) ℓ (Imp pt)	5.4 (9-1/2)													
Rear final drive [Grade]	Option-al	Stand-ard	Option-al	Stand-ard	Option-al	Stand-ard	Option-al	Stand-ard	Option-al	Stand-ard	Option-al	Stand-ard	Option-al	
	H233B						H260		H233B					
	Diff. lock	4 pin-ion	Diff. lock	4 pin-ion	Diff. lock	4 pin-ion	Diff. lock	4 pin-ion	Diff. lock	4 pin-ion	Diff. lock	4 pin-ion	Diff. lock	
Gear ratio	4.625		4.111			3.900		4.625		4.111				
Number of teeth (Ring gear/drive pinion)	37/8		37/9			39/10		37/8		37/9				
Oil capacity (Approx.) ℓ (Imp pt)	Without diff. lock	2.4 (4-1/4)				4.7 (8-1/4)		2.4 (4-1/4)						
	With diff. lock	3.0 (5-1/4)				3.7 (6-1/2)		3.0 (5-1/4)						

With LSD model

Body type	Wagon					Hardtop
Engine	TB45E		TD42	RD28ETi		
Transmission	A/T	M/T	M/T	All	M/T	
Rear final drive [Grade]	H233B	H260	H233B			
	LSD					
Gear ratio	3,900	4,111		4,625		
Number of teeth (ring gear/drive pinion)	39/10	37/9		37/8		
Oil capacity (Approx.) ℓ (Imp pt)	2.1 (3-3/4)	4.7 (8-1/4)	2.1 (3-3/4)			

INSPECTION AND ADJUSTMENT (H233B)

Ring gear runout

Ring gear runout limit	mm (in)	0.08 (0.0031)
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Side gear adjustment (without LSD) (H233B)

Side gear backlash (Clearance between side gear to differential case)	mm (in)	0.15 - 0.20 (0.0059 - 0.0079)
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Available side gear thrust washers

Thickness	mm (in)	Part number
1.75 (0.0689)		38424-T5000
1.80 (0.0709)		38424-T5001
1.85 (0.0728)		38424-T5002

SERVICE DATA AND SPECIFICATIONS (SDS)

Final Drive (Cont'd)

— Additional service for LSD model — (H233B)

Differential torque adjustment

Differential torque N-m (kg-m, ft-lb)	108 - 137 (11 - 14, 80 - 101)
Number of discs and plates	
Friction disc	4
Friction plate	4
Spring plate	4
Wear limit of plate and disc mm (in)	0.1 (0.004)
Allowable warpage of friction disc and plate mm (in)	0.08 (0.0031)
Available discs and plates	
Part name	Thickness mm (in) Part number
Friction disc	1.48 - 1.52 (0.0583 - 0.0598) 38433-C6000 (Standard type)
	1.58 - 1.62 (0.0622 - 0.0638) 38433-C6001 (Adjusting type)
Friction plate	1.48 - 1.52 (0.0583 - 0.0598) 38432-C6000
Spring disc	1.48 - 1.52 (0.0583 - 0.0598) 38436-C6000
Spring plate	1.48 - 1.52 (0.0583 - 0.0598) 38435-C6010

Drive pinion height adjustment (H233B)

Available pinion height adjusting washers

Thickness	mm (in)	Part number
2.58 (0.1016)		38151-01J00
2.61 (0.1028)		38151-01J01
2.64 (0.1039)		38151-01J02
2.67 (0.1051)		38151-01J03
2.70 (0.1063)		38151-01J04
2.73 (0.1075)		38151-01J05
2.76 (0.1087)		38151-01J06
2.79 (0.1098)		38151-01J07
2.82 (0.1110)		38151-01J08
2.85 (0.1122)		38151-01J09
2.88 (0.1134)		38151-01J10
2.91 (0.1146)		38151-01J11
2.94 (0.1157)		38151-01J12
2.97 (0.1169)		38151-01J13
3.00 (0.1181)		38151-01J14
3.03 (0.1193)		38151-01J15
3.06 (0.1205)		38151-01J16
3.09 (0.1217)		38151-01J17
3.12 (0.1228)		38151-01J18
3.15 (0.1240)		38151-01J19
3.18 (0.1252)		38151-01J60
3.21 (0.1264)		38151-01J61
3.24 (0.1276)		38151-01J62
3.27 (0.1287)		38151-01J63
3.30 (0.1299)		38151-01J64
3.33 (0.1311)		38151-01J65
3.36 (0.1323)		38151-01J66
3.39 (0.1335)		38151-01J67
3.42 (0.1346)		38151-01J68
3.45 (0.1358)		38151-01J69
3.48 (0.1370)		38151-01J70
3.51 (0.1382)		38151-01J71
3.54 (0.1394)		38151-01J72
3.57 (0.1406)		38151-01J73
3.60 (0.1417)		38151-01J74
3.63 (0.1429)		38151-01J75
3.66 (0.1441)		38151-01J76

Drive pinion preload adjustment (H233B)

Drive pinion bearing preload adjusting method	Adjusting shim and spacer	
Drive pinion preload N-m (kg-cm, in-lb)		
With front oil seal	1.4 - 1.7 (14 - 17, 12 - 15)	
Without front oil seal	1.2 - 1.5 (12 - 15, 10 - 13)	
Available drive pinion preload adjusting shims		
Thickness	mm (in)	Part number
2.31 (0.0909)		38125-82100
2.33 (0.0917)		38126-82100
2.35 (0.0925)		38127-82100
2.37 (0.0933)		38128-82100
2.39 (0.0941)		38129-82100
2.41 (0.0949)		38130-82100
2.43 (0.0957)		38131-82100
2.45 (0.0965)		38132-82100
2.47 (0.0972)		38133-82100
2.49 (0.0980)		38134-82100
2.51 (0.0988)		38135-82100
2.53 (0.0996)		38136-82100
2.55 (0.1004)		38137-82100
2.57 (0.1012)		38138-82100
2.59 (0.1020)		38139-82100

Available drive pinion preload adjusting spacers

Length	mm (in)	Part number
4.50 (0.1772)		38165-76000
4.75 (0.1870)		38166-76000
5.00 (0.1969)		38167-76000
5.25 (0.2067)		38166-01J00
5.50 (0.2165)		38166-01J10

Total preload adjustment (H233B)

Total preload N-m (kg-cm, in-lb) With front oil seal	Drive pinion bearing	New	1.7 - 2.5 (17 - 25, 15 - 22)
		Old	1.5 - 1.7 (15 - 17, 13 - 15)
Ring gear backlash	mm (in)		0.15 - 0.20 (0.0059 - 0.0079)
Side bearing adjusting method	Side adjuster		

INSPECTION AND ADJUSTMENT (H260)

Ring gear runout

Ring gear runout limit	mm (in)	0.08 (0.0031)
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Side gear adjustment (without LSD) (H260)

Side gear backlash (Clearance between side gear to differential case)	mm (in)	0.15 - 0.20 (0.0059 - 0.0079)
Available side gear thrust washers		
Thickness	mm (in)	Part number
1.55 (0.0610)		38424-61500
1.60 (0.0630)		38424-61501
1.65 (0.0650)		38424-61502

SERVICE DATA AND SPECIFICATIONS (SDS)

Final Drive (Cont'd)

— Additional service for LSD model — (H260)

Differential torque adjustment

Differential torque N-m (kg-m, ft-lb)	157 - 186 (16 - 19, 116 - 137)
Number of discs and plates	
Friction disc	4
Friction plate	4
Spring plate	4
Wear limit of plate and disc mm (in)	0.1 (0.004)
Allowable warp of friction disc and plate mm (in)	0.08 (0.0031)
Side gear backlash (Clearance between side gear and differential case) mm (in)	0.05 - 0.20 (0.0020 - 0.0079)
Available discs and plates	
Part name	Thickness mm (in) Part number
Friction disc	2.38 - 2.42 (0.0937 - 0.0953) 38433-C8700
Friction plate	2.38 - 2.42 (0.0937 - 0.0953) 38432-C8700
	2.48 - 2.52 (0.0976 - 0.0992) 38432-C8701
Spring plate	2.38 - 2.42 (0.0937 - 0.0953) 38435-76010

Drive pinion height adjustment (H260)

Available pinion height adjusting washers

Thickness	mm (in)	Part number
2.60 (0.1024)		38153-82101
2.63 (0.1035)		38153-82102
2.66 (0.1047)		38153-82103
2.69 (0.1059)		38153-82104
2.72 (0.1071)		38153-82105
2.75 (0.1083)		38153-82106
2.78 (0.1094)		38153-82107
2.81 (0.1106)		38153-82108
2.84 (0.1118)		38153-82109
2.87 (0.1130)		38153-82110
2.90 (0.1142)		38153-82111
2.93 (0.1154)		38153-82112
2.96 (0.1165)		38153-82113
2.99 (0.1177)		38153-82114
3.02 (0.1189)		38153-82115
3.05 (0.1201)		38153-82116
3.08 (0.1213)		38153-82117
3.11 (0.1224)		38153-82118
3.14 (0.1236)		38153-82119
3.17 (0.1248)		38153-82120

Drive pinion preload adjustment (H260)

Drive pinion bearing preload adjusting method	Adjusting shim and spacer
Drive pinion preload N-m (kg-cm, in-lb)	
With front oil seal	1.4 - 1.7 (14 - 17, 12 - 15)
Without front oil seal	1.2 - 1.5 (12 - 15, 10 - 13)

Available drive pinion preload adjusting shims

Thickness	mm (in)	Part number
2.31 (0.0909)		38125-82100
2.33 (0.0917)		38126-82100
2.35 (0.0925)		38127-82100
2.37 (0.0933)		38128-82100
2.39 (0.0941)		38129-82100
2.41 (0.0949)		38130-82100
2.43 (0.0957)		38131-82100
2.45 (0.0965)		38132-82100
2.47 (0.0972)		38133-82100
2.49 (0.0980)		38134-82100
2.51 (0.0988)		38135-82100
2.53 (0.0996)		38136-82100
2.55 (0.1004)		38137-82100
2.57 (0.1012)		38138-82100
2.59 (0.1020)		38139-82100

Available drive pinion preload adjusting spacers

Length	mm (in)	Part number
4.50 (0.1772)		38165-76000
4.75 (0.1870)		38166-76000
5.00 (0.1969)		38167-76000

Total preload adjustment (H260)

Total preload N-m (kg-cm, in-lb) With front oil seal	Drive pinion bearing	New	1.7 - 2.5 (17 - 25, 15 - 22)
		Old	1.5 - 1.7 (15 - 17, 13 - 15)
Ring gear backlash	mm (in)		0.18 - 0.23 (0.0071 - 0.0091)
Side bearing adjusting method	Side adjuster		

GI
MA
EM
LC
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FE
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MT
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PD
FA
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BT
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