

Automatic Transmission Case, Gears, Shafts

Quick Data	Index	
lubricant capacity—(090) dry fill 6.4 US qt (6.0 ltr) refill 3.2 US qt (3.0 ltr) type ATF DEXRON [®] or DEXRON [®] II oil pan bolt 20 Nm/ 14 ft lb	<ul style="list-style-type: none"> —Apply shell 38.10 <ul style="list-style-type: none"> code letters NH only 38.13 —ATF, filling 37.6 —ATF cooler, installing <ul style="list-style-type: none"> code letters NH only 38.13 —Direct/reverse clutch 38.19 <ul style="list-style-type: none"> adjusting end play 38.21 checking 38.21 drum bushing 38.20 installing 38.11 —Final drive oil seal 37.7 —Forward clutch 38.8, 38.17 <ul style="list-style-type: none"> adjusting end play 38.18 checking 38.18 —Governor 38.22 <ul style="list-style-type: none"> drive gear 38.14 code letters NH only 38.23 —Installing 37.5, 37.6 —Kickdown lever <ul style="list-style-type: none"> code letters NH only 38.39 —Modification 38.28 —Oil pump 38.8, 38.22 <ul style="list-style-type: none"> installing 38.10 —One-way clutch 38.14, 38.15 <ul style="list-style-type: none"> code letters NH only 38.16 —Operation 37.10–37.12 —Parking lock 38.34 <ul style="list-style-type: none"> modifications 38.35 code letters NH only 38.39 —Pump/turbine shafts 38.3, 38.4 —Removing 37.4, 37.5 —Reverse planetary gear set 38.12 	<ul style="list-style-type: none"> —Reverse planetary ring gear 38.14 —Spacer springs/rollers 38.15 <ul style="list-style-type: none"> code letters NH only 38.16 —Thrust washers 38.9 —Transmission assembly 38.7 <ul style="list-style-type: none"> housing studs 38.4 —Transmission/final drive <ul style="list-style-type: none"> assembly 38.2, 38.3 —Valve body 38.25–38.29 <ul style="list-style-type: none"> assembly 38.29 disassembling/assembling 38.33 code letters NH only 38.36 modifications 38.31 removing/installing 38.25 separation plate 38.26, 38.27 code letters NH only 38.37, 38.38 spring, table 38.30 modifications 38.32 transfer plate 38.26, 38.27 code letters NH only 38.37, 38.38 —1st/reverse brake piston 38.10 <ul style="list-style-type: none"> checking 38.11 installing 38.10 code letters NH only 38.13 —2nd gear brake band <ul style="list-style-type: none"> adjusting 38.12 checking 38.11 piston 38.10 disassembling/assembling 38.24 installing 38.11

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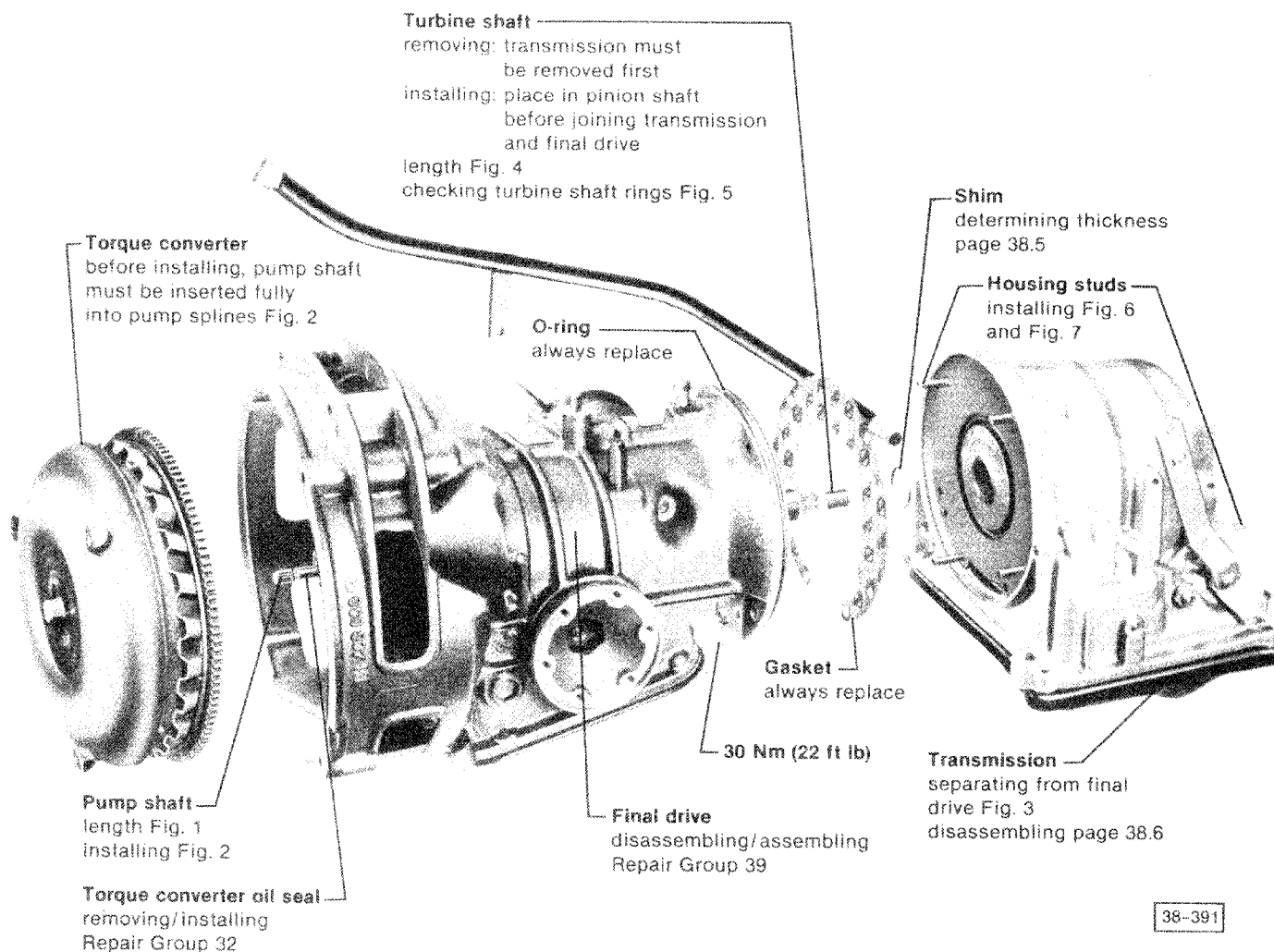
Note

Final drive/transmission oil seal is installed in final drive, but sealing lip fits shoulder on governor drive gear in transmission.

If only oil seal is to be replaced, transmission should not be tilted when removing from final drive to avoid oil leakage and mixing

CAUTION

When final drive or transmission are repaired, check transmission/final drive end play (see page 38.4)



Gear ratios

1st gear	2.55:1
2nd gear	1.45:1
3rd gear	1.00:1
Reverse	2.46:1



Fig. 1 Pump shaft length
 • a = 546.7 mm (21.524 in.)

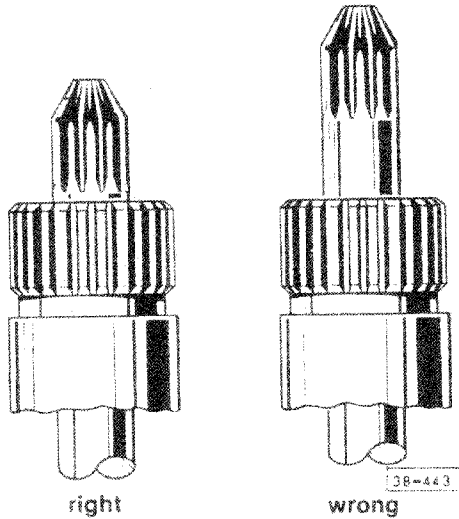


Fig. 2 Pump shaft, inserting

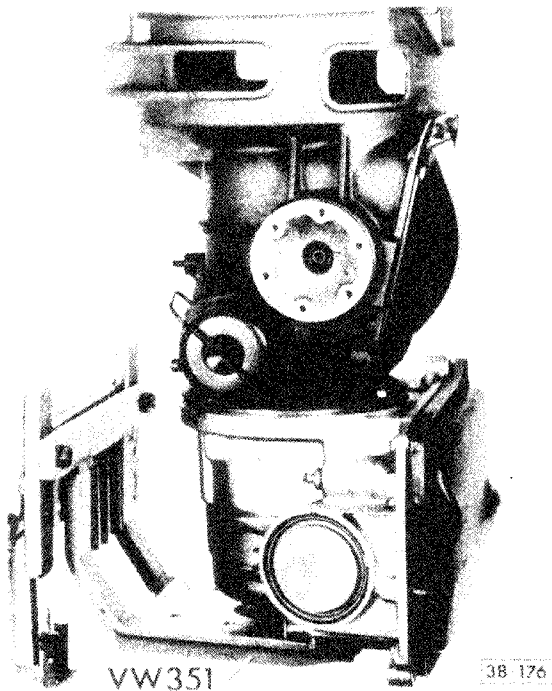


Fig. 3 Transmission/Final drive, separating
 — mount transmission/final drive assembly as shown
 — drain ATF

- remove final drive
- drain oil from final drive



Fig. 4 Turbine shaft, length
 • a = 457.8 mm (18.024 in.)

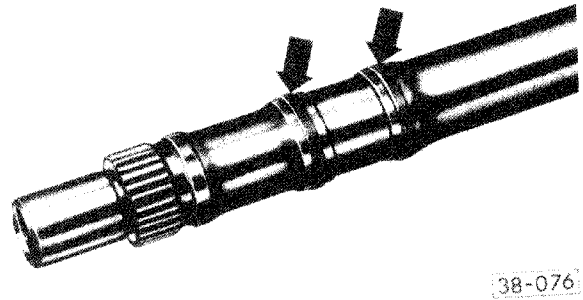


Fig. 5 Turbine shaft rings, checking
 — check rings (arrows) for wear and proper seating

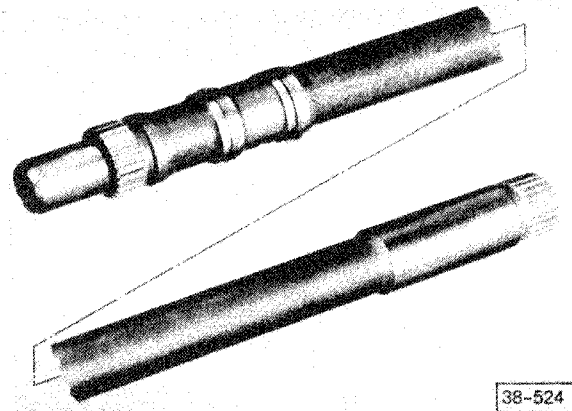
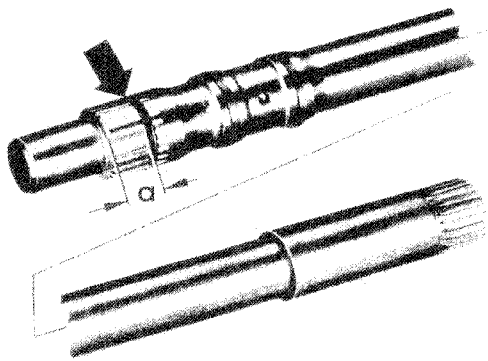


Fig. 6 Turbine shaft, early version
 • turbine shaft for forward clutch with thrust washer

Note

Do not install together with thrust bearing

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Fig. 7 Turbine shaft, later version

- turbine shaft for forward clutch with thrust bearing
- identification: groove for circlip on splines (arrow)

CAUTION

Never install shaft without circlip

Note

New shaft with circlip can be installed together with early version oil pump and thrust washer

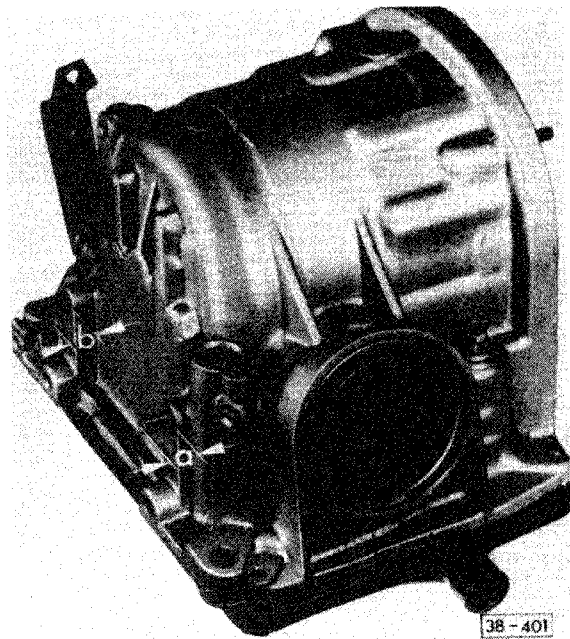


Fig. 9 Transmission housing studs, installing

- a and b = 18 mm (23/32 in.)

Note

Housings supplied as Spare Parts are without studs. When installing studs, use studs of correct length and install to proper depth

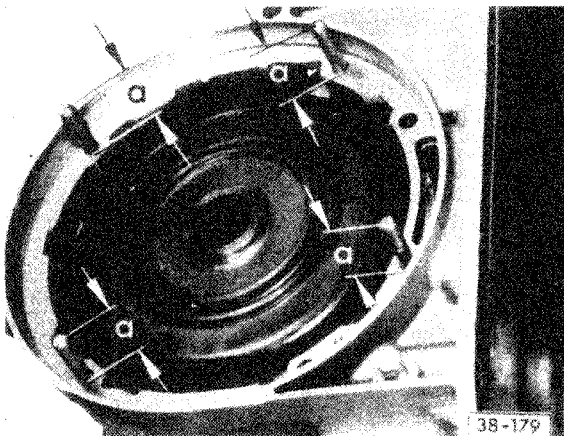


Fig. 8 Transmission housing studs, installing

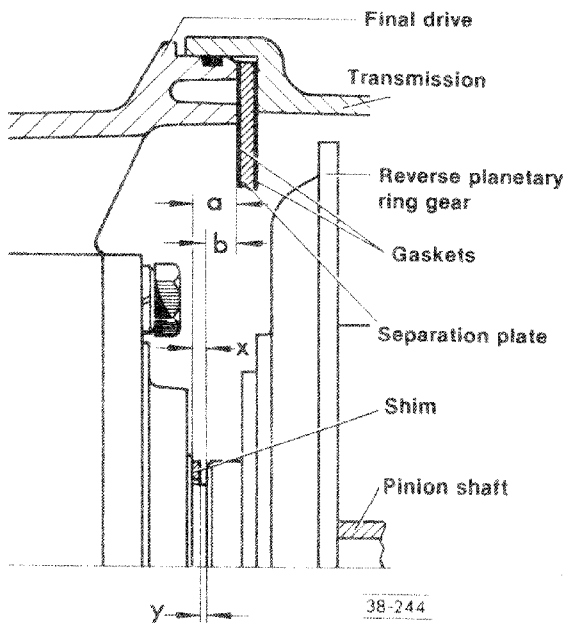
- a = 31.5 mm (1 1/4 in.)

Transmission/Final drive end play, adjusting

Note

End play y between transmission and final drive must be adjusted to limit end play of reverse planetary ring gear

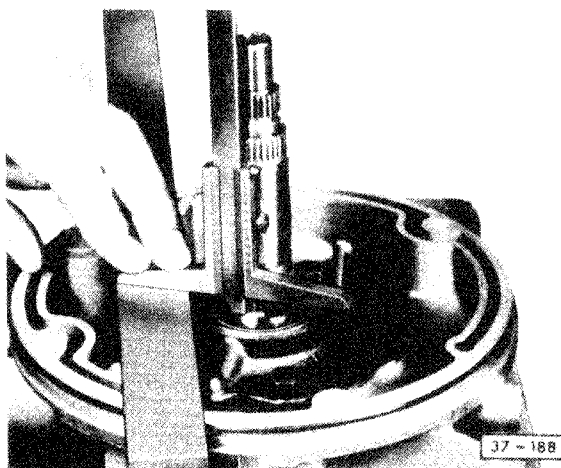
Work sequence



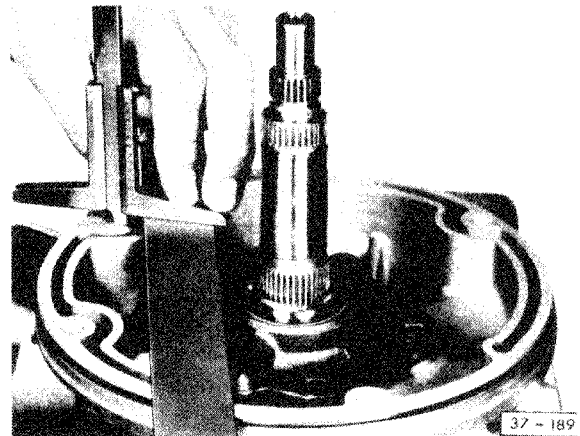
Measuring points:

- Final drive housing: joint to oil seal bushing a
- Transmission housing: shim contact shoulder to separation plate with gasket b

Dimension a, measuring



— measure dimension from straightedge to oil seal bushing



— measure dimension from straight edge to final drive housing joint

Example

from straight edge to oil seal bushing

18.7 mm

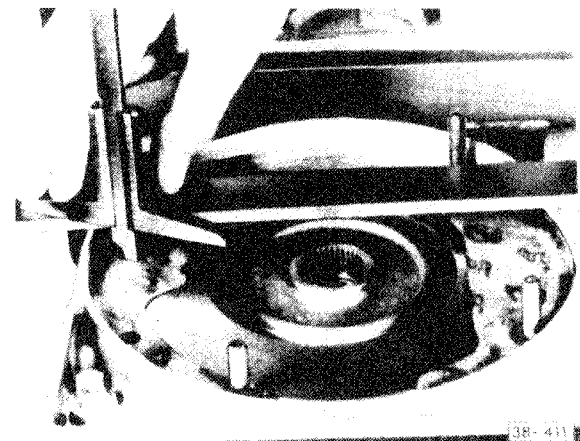
from straight edge to joint

— 8.0 mm

Dimension a

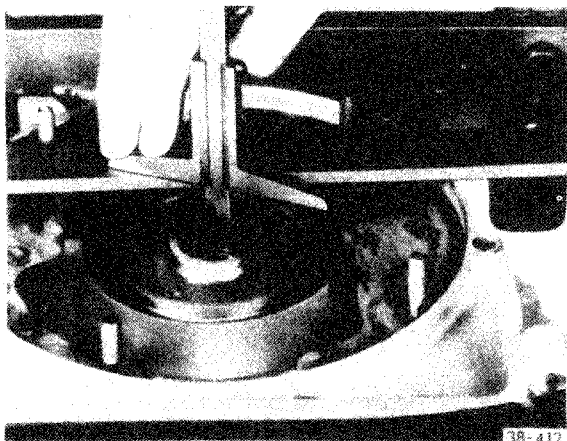
= 10.7 mm

Dimension b, measuring



— measure dimension from straight edge on housing to gasket on plate

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— measure dimension from straight edge to shoulder for shims

Example

from straight edge to plate	19.2 mm
from straight edge to shoulder	— 10.0 mm
Dimension b	= 9.2 mm

Shim thickness, determining

— deduct b from a
• result is dimension x

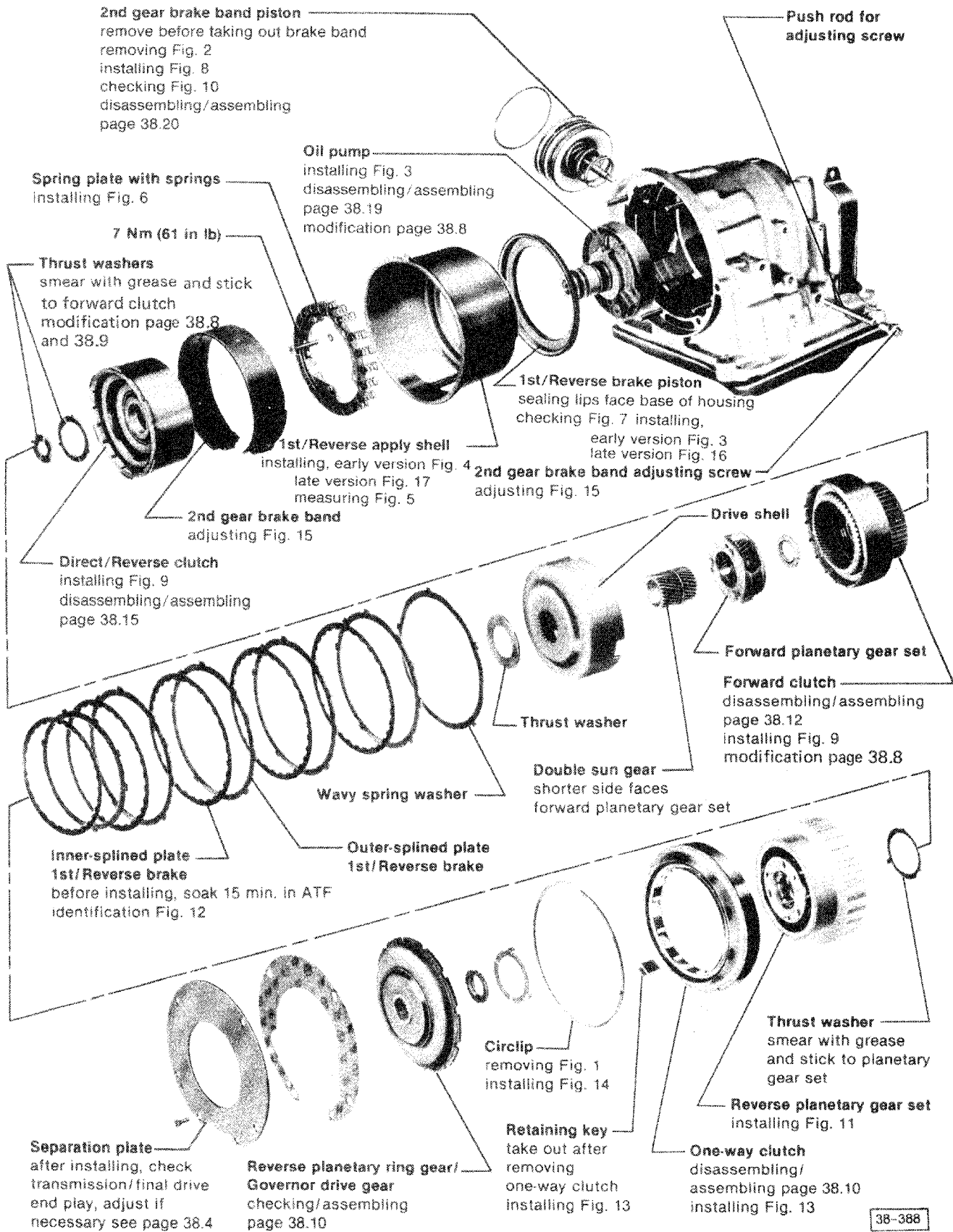
Example

Dimension a	10.7 mm
Dimension b	— 9.2 mm
Dimension x	= 1.5 mm

— select shims from table (shims are available in two thicknesses, 0.4 mm and 1.2 mm)

Dimension x mm	Shim mm
0.23–0.84	none
0.85–1.24	1 × 0.4
1.25–1.64	2 × 0.4
1.65–2.04	1 × 1.2
2.05–2.44	1 × 0.4
	1 × 1.2
2.45–2.84	2 × 0.4
	1 × 1.2
2.85–3.24	2 × 1.2
3.25–3.64	1 × 0.4
	2 × 1.2
3.65–3.88	2 × 0.4
	2 × 1.2

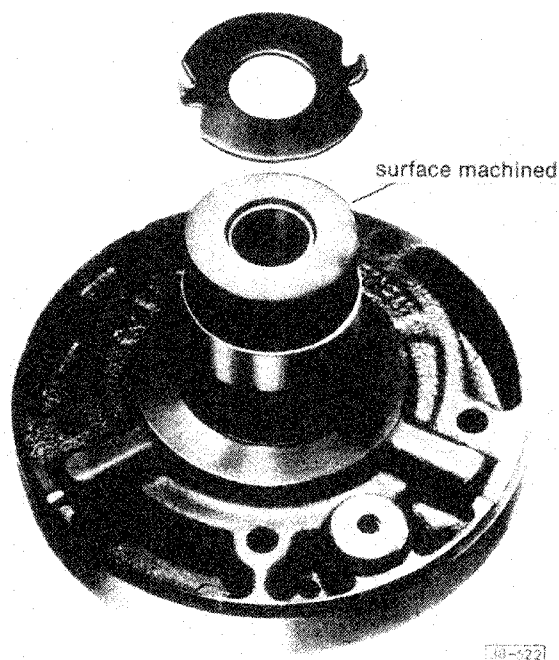
38.6 Transmission/Final drive end play



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Oil pump and forward clutch, modifications

Up to Dec. 1981

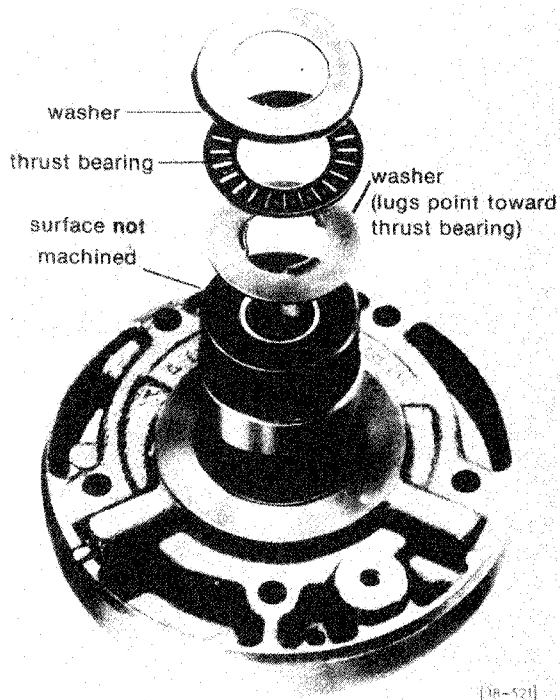


Oil pump with thrust washer

Note

Can be installed together with thrust bearing

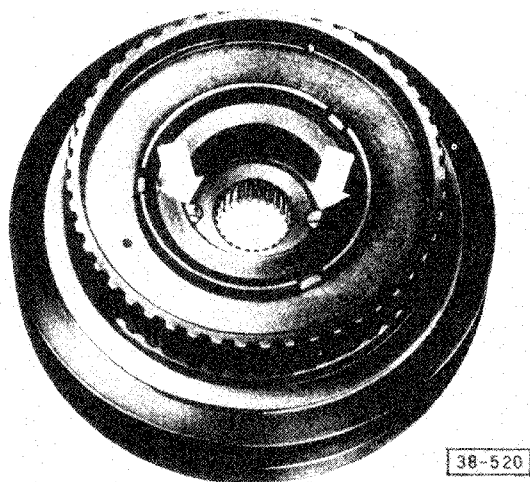
From Dec. 1981



Oil pump with thrust bearing

Note

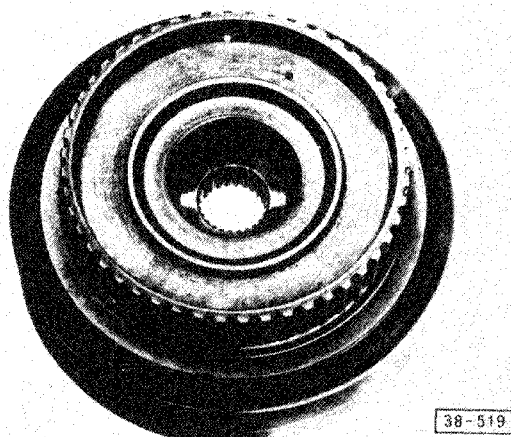
Do not install with thrust washer only



Forward clutch with thrust washer
• identification: drillings (arrows)

Note

Do not install together with thrust bearing



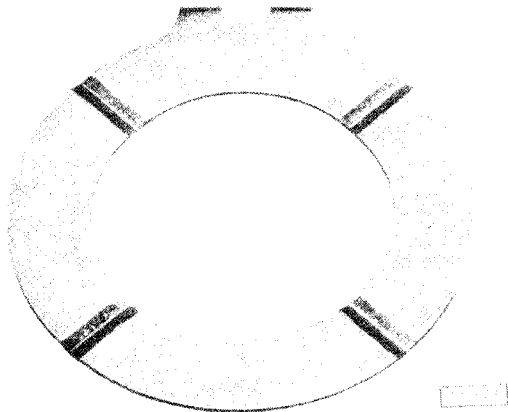
Forward clutch with thrust bearing
• identification: no drillings

Note

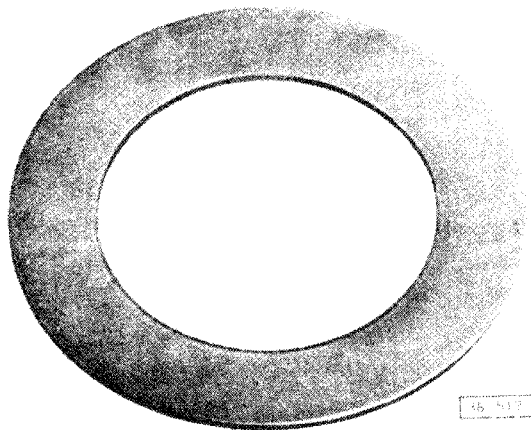
Do not install together with thrust washer

Thrust washers

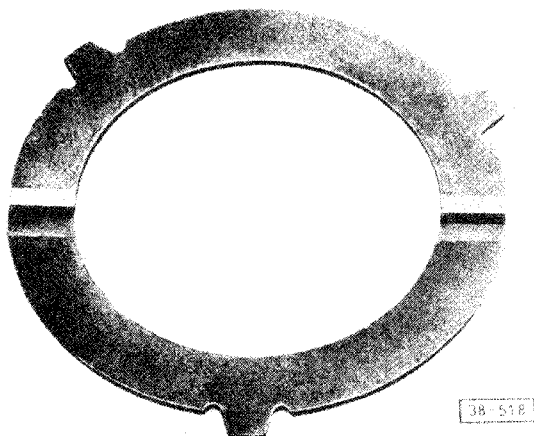
Up to Dec. 1981



between oil pump and D + R clutch
(steel/bronze)

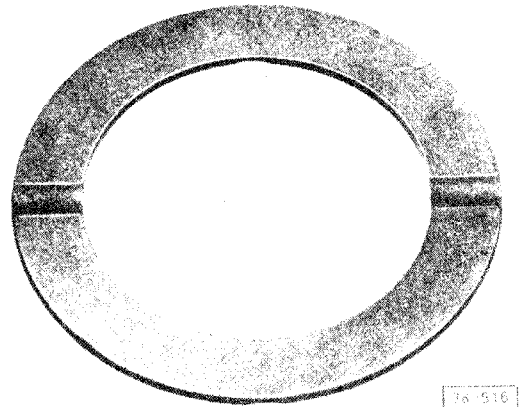


between oil pump and D + R clutch
(plastic)



between forward clutch and D + R clutch

From Dec. 1981



between oil pump and D + R clutch, also
between forward clutch and D + R clutch
(plastic)

Note

New thrust washers can also be installed in
previous transmissions

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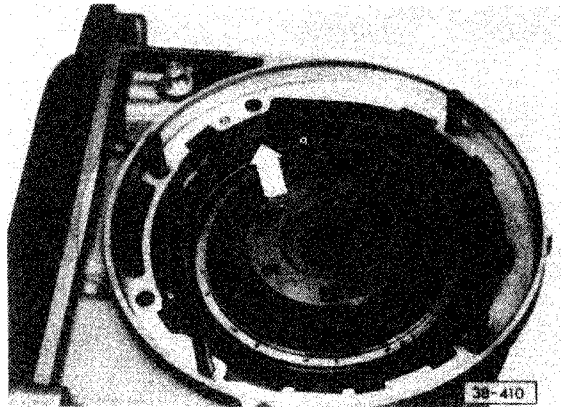


Fig. 1 Circlip, removing
— remove from groove (arrow)

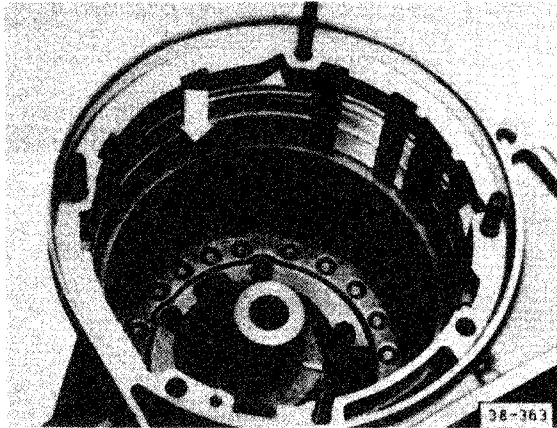


Fig. 4 Apply shell, installing
— insert lug (arrow) in groove shown

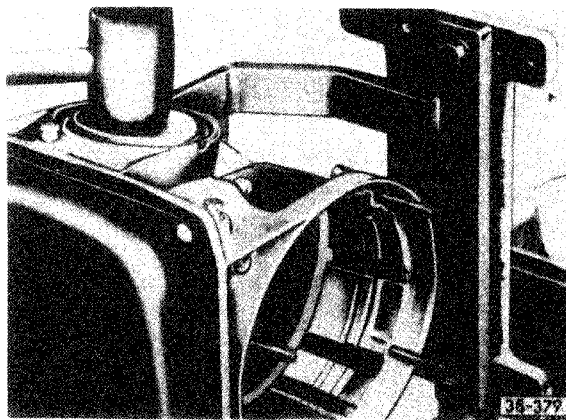


Fig. 2 2nd gear brake band piston, removing
— remove circlip
— remove piston by tapping lightly with rubber hammer

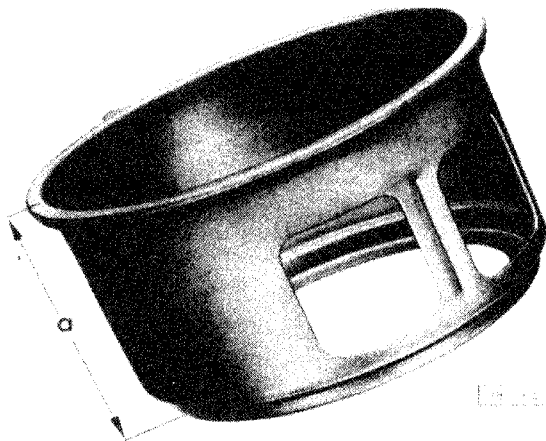


Fig. 5 Apply shell, measuring
• a = 91.4 mm (3.598 in.)

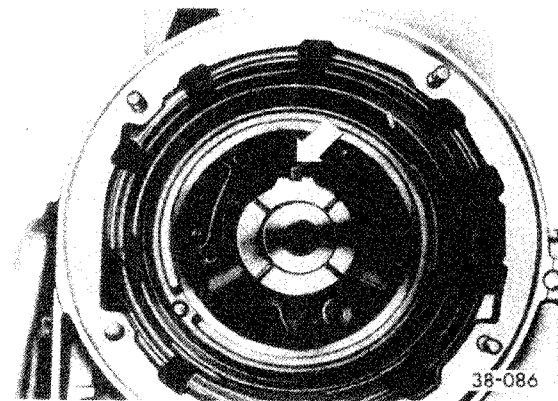


Fig. 3 1st/Reverse brake piston/Oil pump, installing
— push piston onto pump housing and insert pump in housing. Thin rib (arrow) must point up
— insert pump shaft in drive plate and turn pump. Pump should turn freely

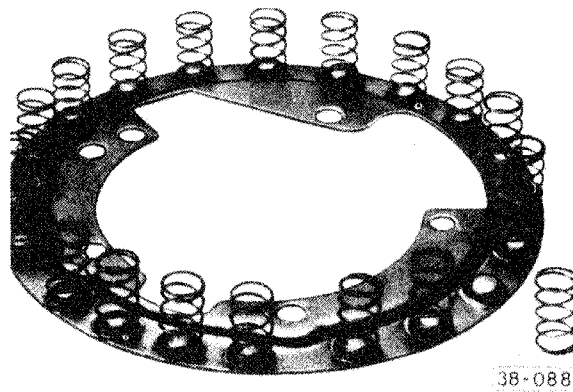


Fig. 6 Spring plate with springs, installing
— place springs on plate
— place in housing with springs facing down and tighten in this position

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2nd gear brake band piston
1st/Reverse brake piston/Oil pump
Apply shell

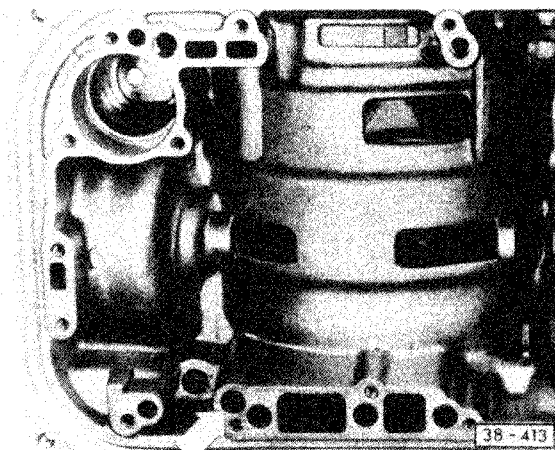


Fig. 7 1st/Reverse gear brake, checking

- apply low air pressure to port (arrow)
 - piston must compress springs
 - piston must return to original position, when compressed air is released

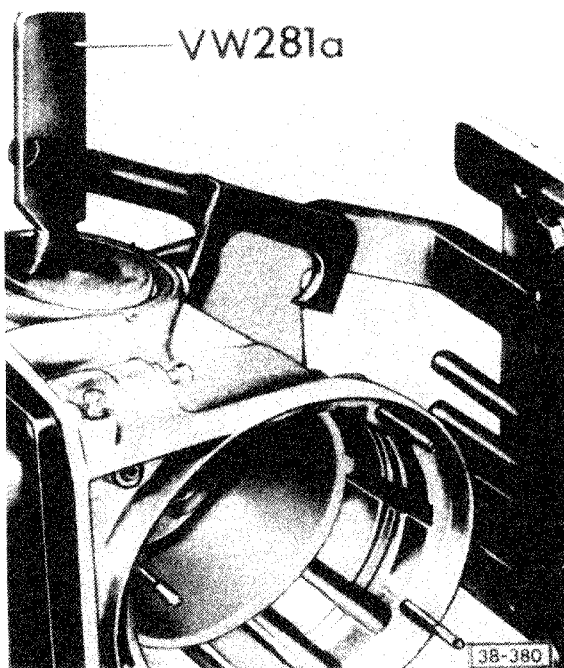


Fig. 8 2nd gear brake band piston, installing

- press piston down and insert circlip

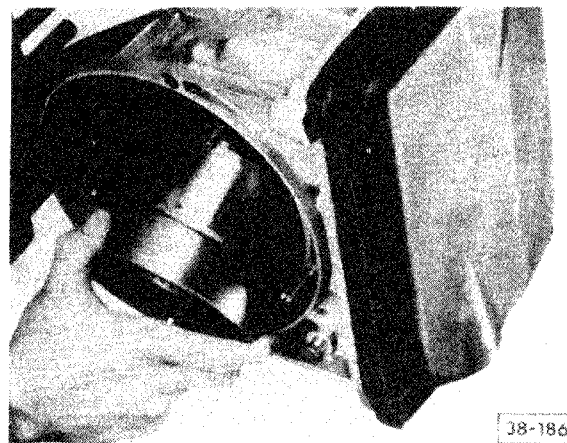


Fig. 9 Direct/Reverse and Forward clutches, installing

- assemble direct/reverse and forward clutches first
- angle transmission housing downward and slide clutches onto neck of oil pump
- turn transmission so opening faces up

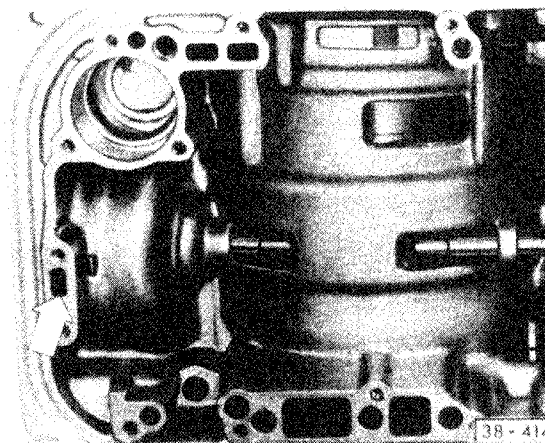


Fig. 10 2nd gear brake, checking

- apply low air pressure to port (arrow)
 - brake band must apply
 - brake band must release when air pressure removed

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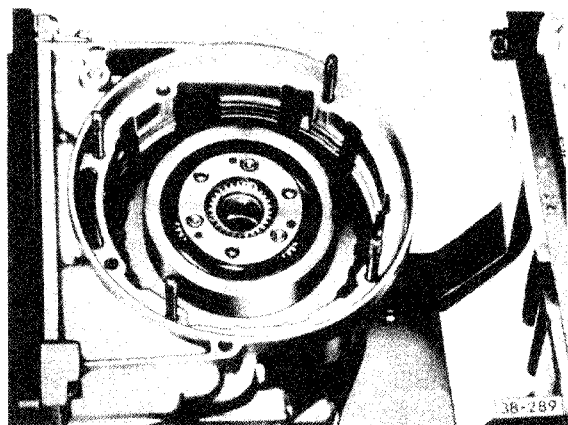


Fig. 11 Reverse planetary gear set, installing

- first insert planetary gear set
- insert wavy spring washer and plates

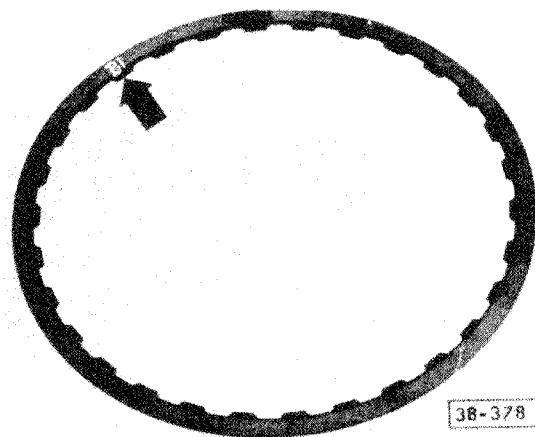


Fig. 12 1st gear brake splined plates, identification

- plates are marked **B1** (arrow)

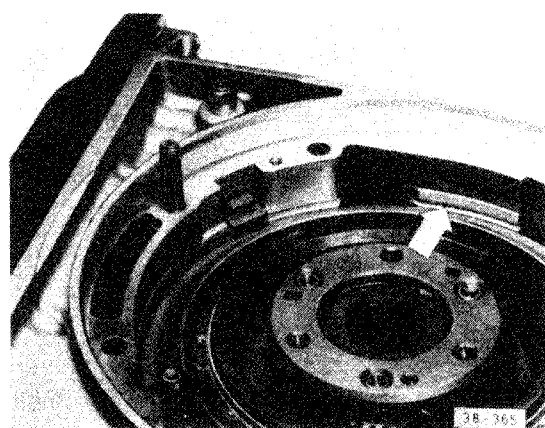


Fig. 13 One-way clutch, installing

- parts are installed properly if groove for circlip is exposed (arrow)
- it must **not** be possible to turn planetary gear set counterclockwise

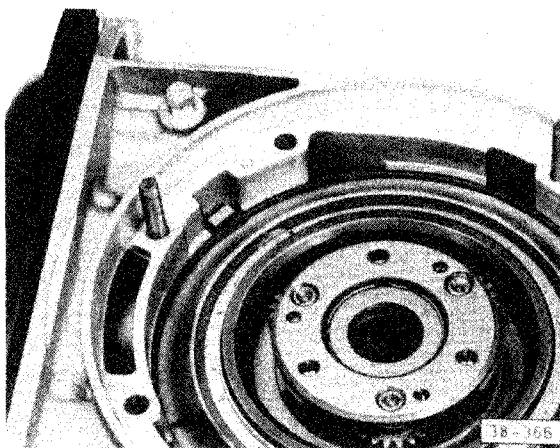


Fig. 14 Circlip, installing

- circlip opening must be opposite retaining key

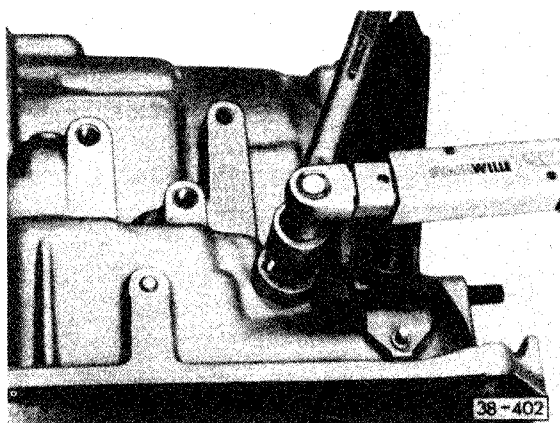


Fig. 15 2nd gear brake band adjusting screw, adjusting

- first loosen locknut and tighten adjusting screw to **10 Nm (87 in. lb)**
- loosen and retighten to **5 Nm (43 in. lb)**
- loosen from this position exactly **2 1/2 turns** and tighten locknut

CAUTION

Transmission must be horizontal when adjusting brake bands; otherwise bands may jam

Modifications for transmission 090— code letters NH only

Note

Wavy spring washer for 1st gear brake has been deleted. Apply shell has been lengthened as a result. 1st gear brake piston now has a ball valve.

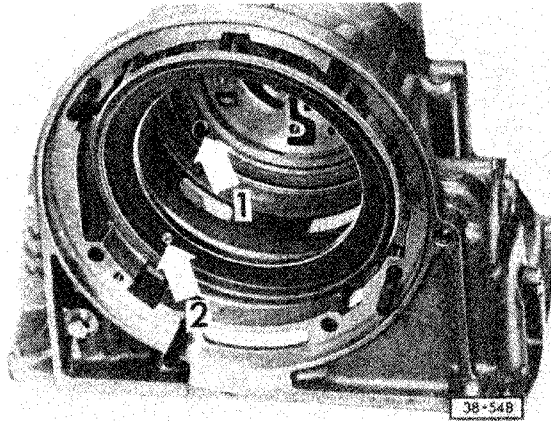


Fig. 16 1st gear brake piston, installing
—lubricate with ATF
• ball valve in piston (arrow 2) must line up with drilling in transmission housing (arrow 1)

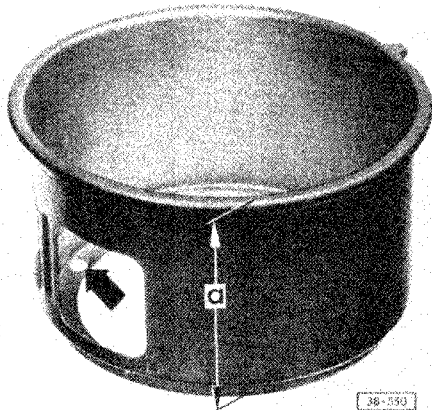


Fig. 17 Apply shell, installing
• a = 97 mm
• drilling (arrow) must line up with ball valve on 1st gear brake piston

Note

Number of inner and outer splined plates used with this length apply shell is 4 each.

New piston with ball valve and apply shell with drilling may be installed in previous transmissions with following requirements:

- do **not** use wavy spring washer
- only use 4 inner and 4 outer splined plates

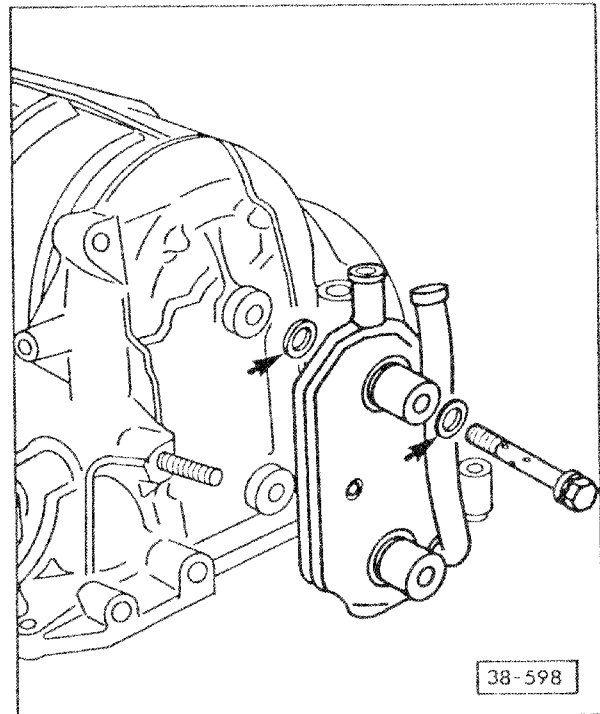
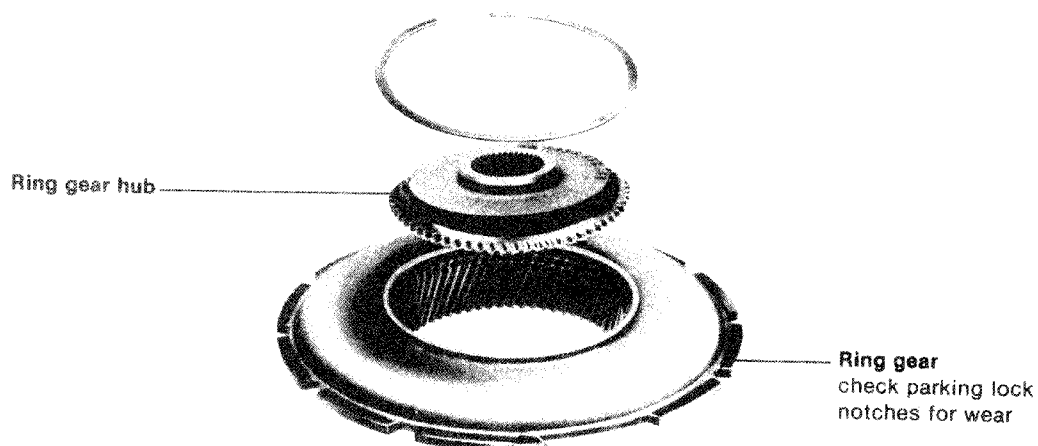


Fig. 18 ATF cooler, installing
• transmission is equipped with ATF cooler secured to transmission with union bolts and sealed with O-rings (arrows).
—tighten union bolts to 40 Nm (30 ft lb)

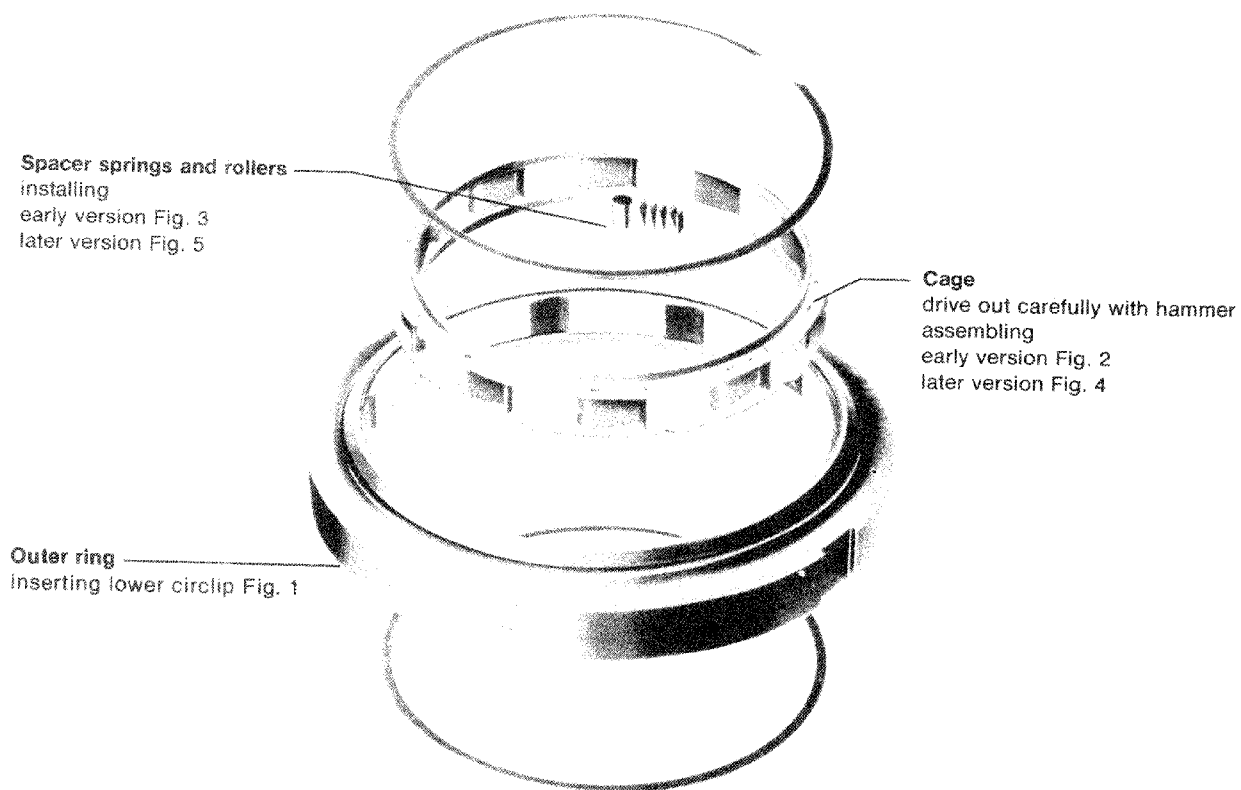
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Reverse planetary ring gear/Governor drive gear, checking/assembling



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One-way clutch, disassembling/assembling



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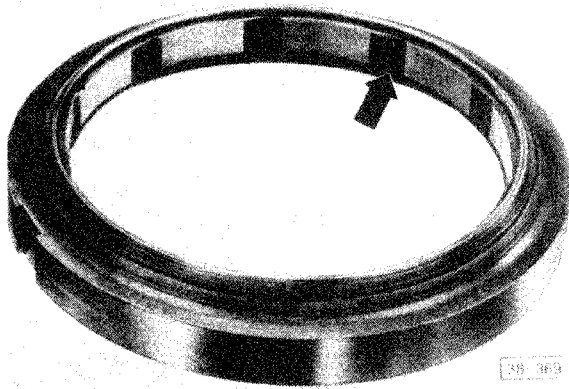


Fig. 1 One-way clutch outer ring, assembling
— place lower circlip in ring (arrow)

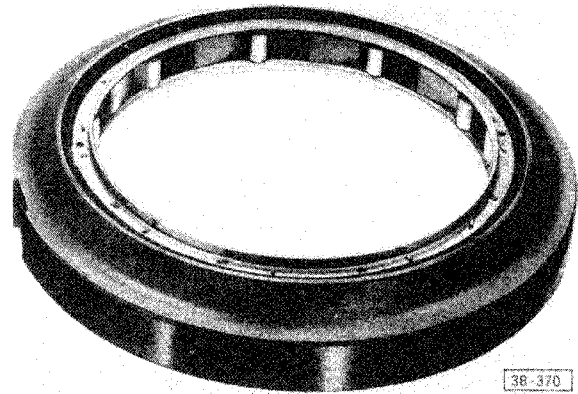


Fig. 3 Spacer springs and rollers, installing
— rollers/springs must be installed in proper relation to each other (as shown)

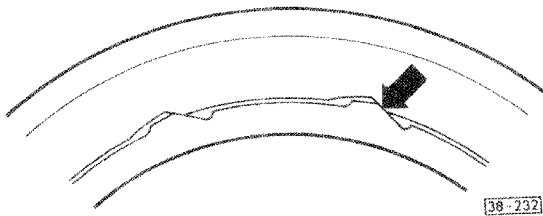
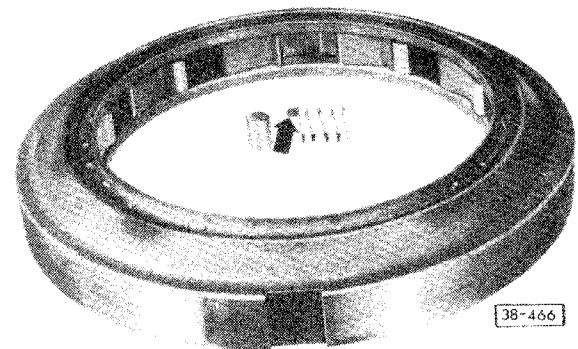


Fig. 2 One-way clutch cage, assembling
— heat outer ring to at least 150°C (300°F) on a hot plate. Set hot plate to at least 190°C (375°F)
— grip upper shoulder of cage with two pairs of pliers and place it quickly in outer ring
— short sides of retaining lugs on cage must be firmly against shoulders in outer ring (arrow). If necessary, turn cage slightly immediately after inserting it

CAUTION

If cage is not properly located on lower circlip and inside of outer ring, do not press it into position. Knock cage out carefully, let cool and repeat procedure



When installing spring with guide lug (arrow), always point lug toward roller to ensure best lateral guidance

Note

Both springs can be installed together, with and without lug

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One-way clutch with plastic cage for rollers and springs

Note

New plastic cage can be service-installed in earlier transmissions. Circlips previously used have been discontinued and cannot be used with plastic cage.

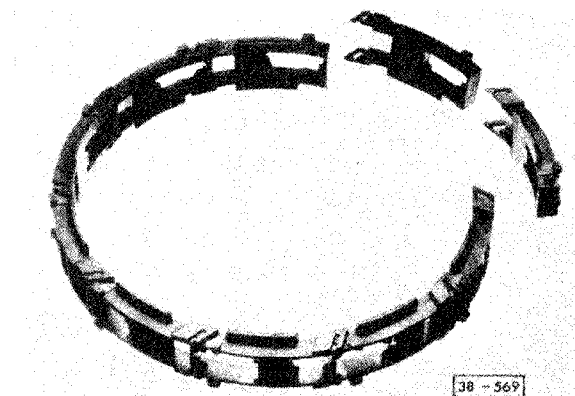


Fig. 4 Plastic cage segments
— assemble 10 segments to form a ring

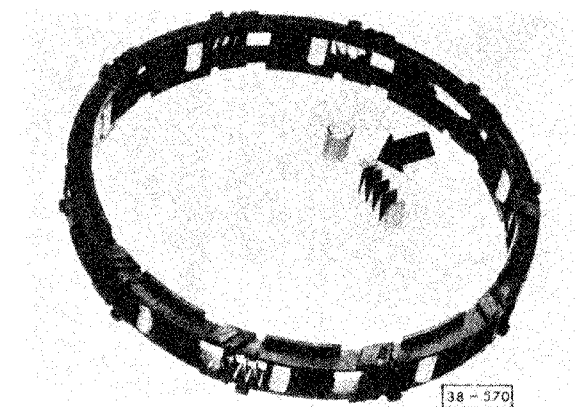


Fig. 5 Springs and rollers, installing
• spring tab (arrow) toward roller

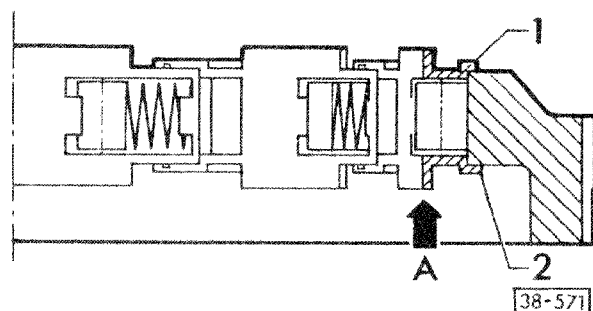


Fig. 6 Installation position of cage
— insert cage into outer ring from below
(direction of arrow A)
• small ledge (1) at top
• large ledge (2) at bottom

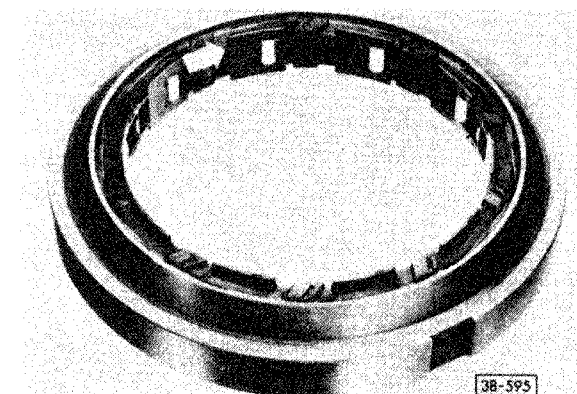
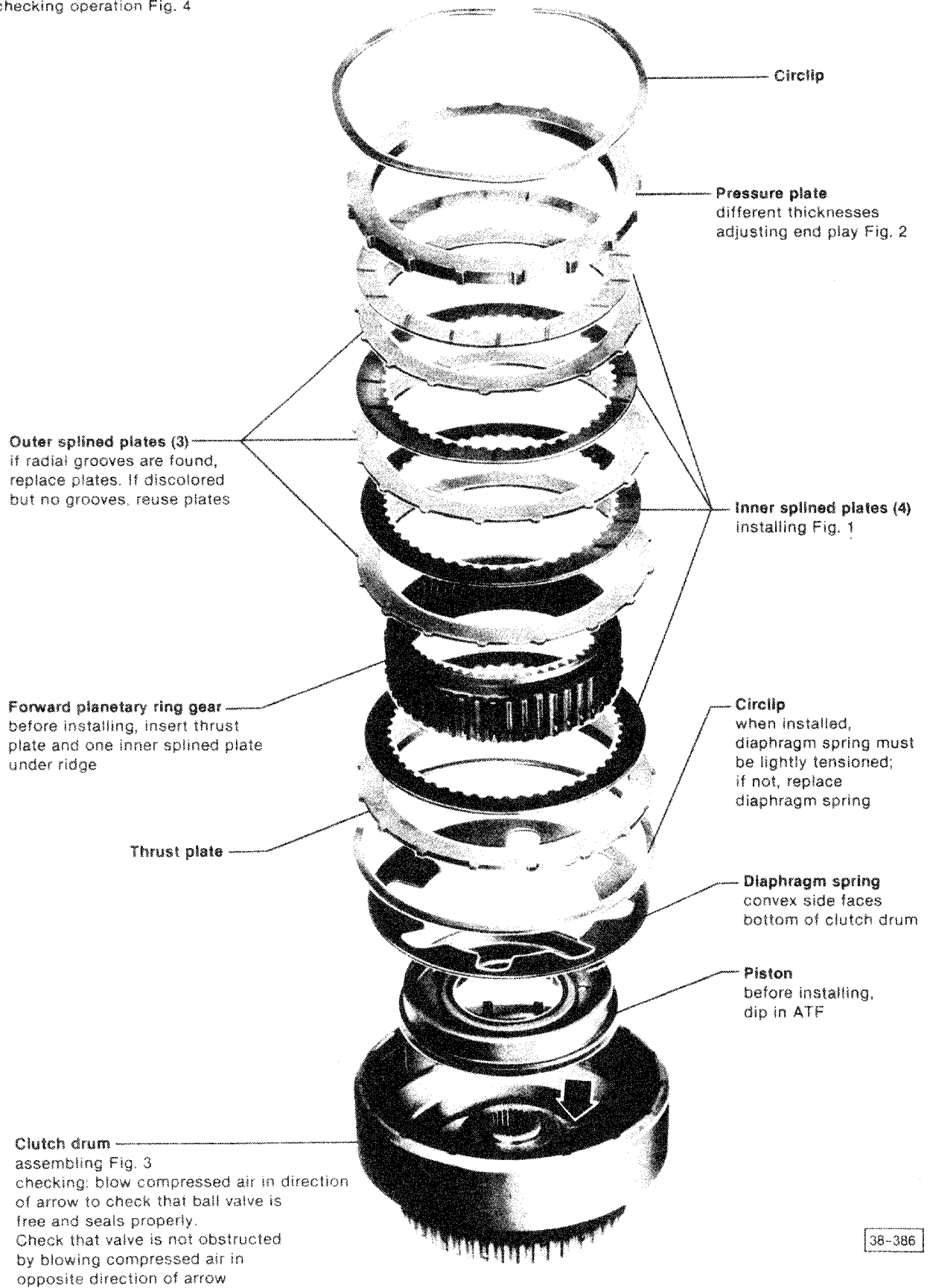


Fig. 7 Securing cage
— turn in direction of arrow

Forward clutch assembly
checking operation Fig. 4



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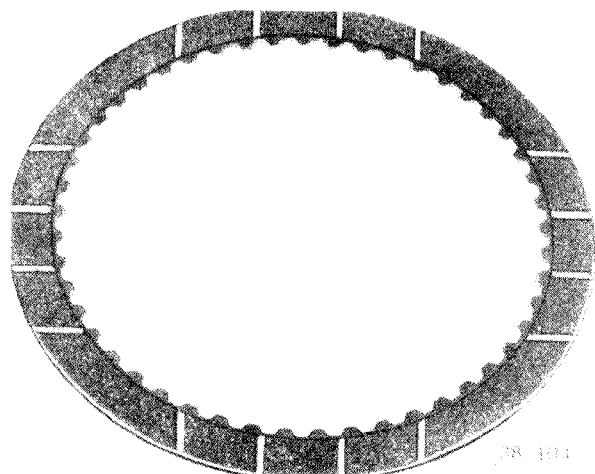


Fig. 1 Inner splined plates, installing

- only install plates with linings marked as shown
- before installing, soak new plates in ATF for 15 minutes

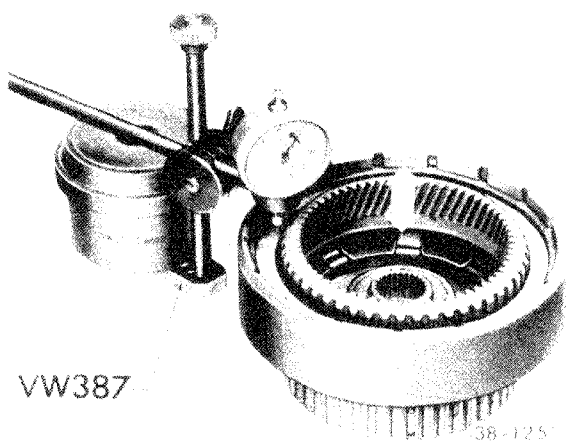


Fig. 2 Forward clutch, adjusting end play

- check that play (arrow) is between 0.5–0.9 mm (0.020–0.035 in.)
- if **NO**, select new pressure plate from table

Thickness (mm)	Part No.
6.0	010 323 253 F
6.4	010 323 253 A
6.8	010 323 253 B
7.2	010 323 253 C
7.6	010 323 253 D

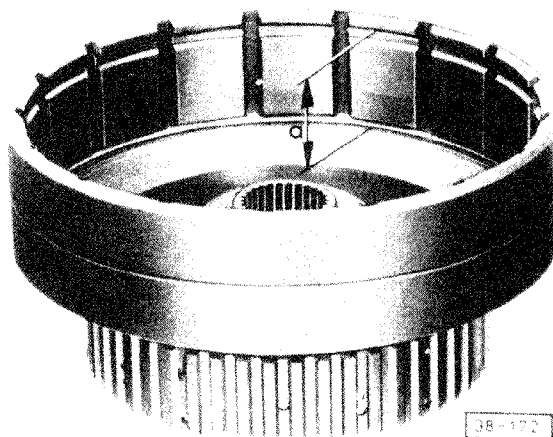


Fig. 3 Forward clutch drum, assembling

- measure depth of grooves
- $a = 29.8 \text{ mm (1.173 in.)}$

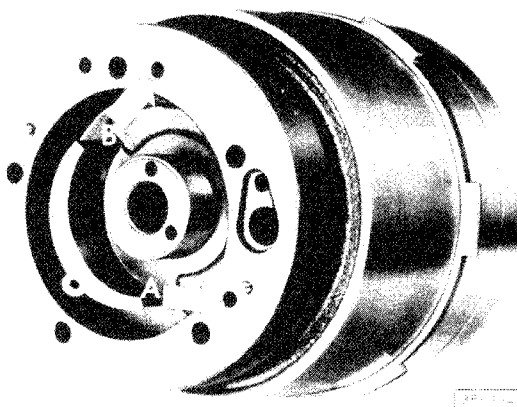
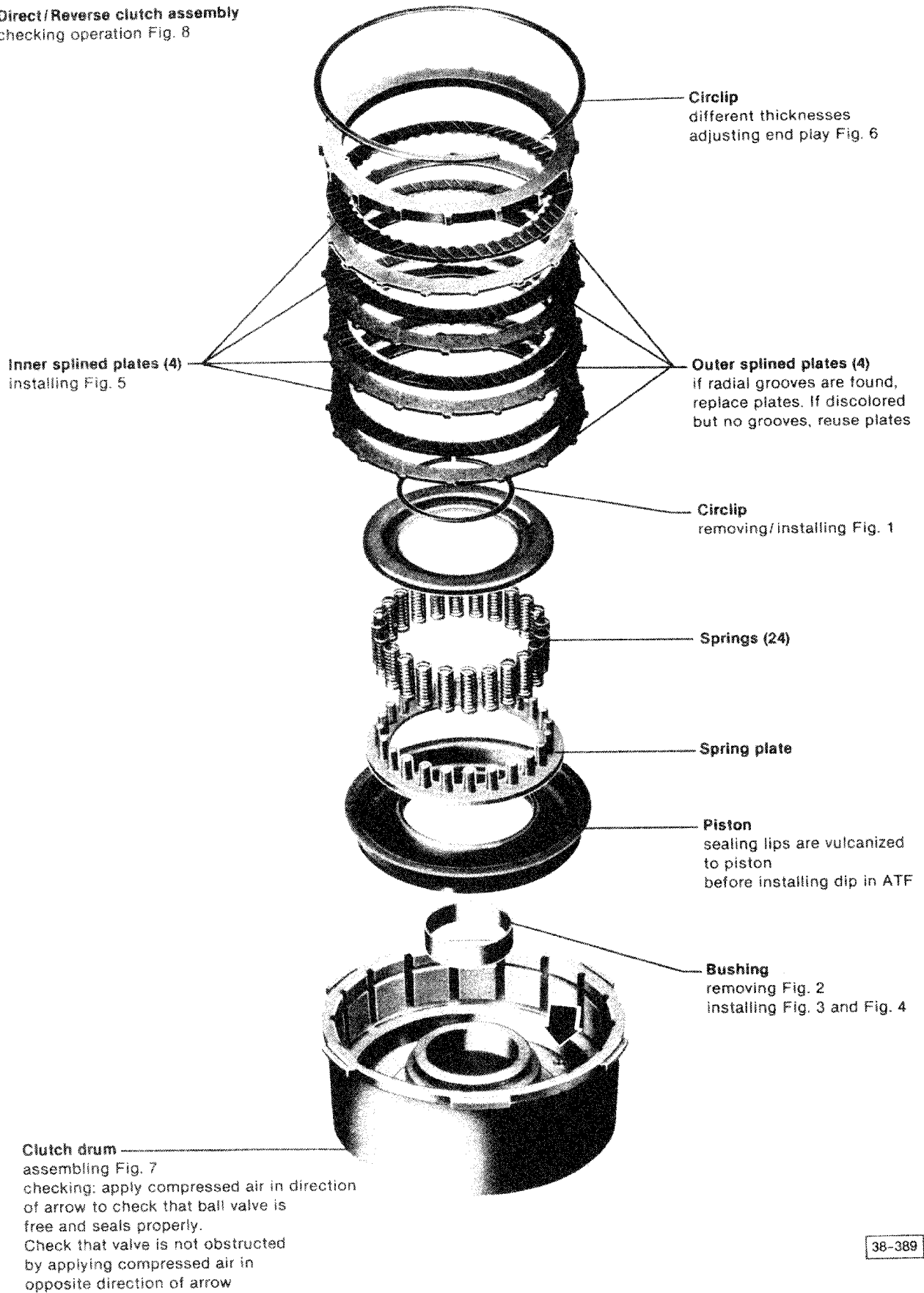


Fig. 4 Forward clutch assembly, checking operation

- install both forward clutch and direct/reverse clutch with thrust washers on oil pump
- apply compressed air to port (arrow A)
 - piston must compress clutch plates
 - piston must release plates when compressed air is removed

Direct/Reverse clutch assembly
checking operation Fig. 8



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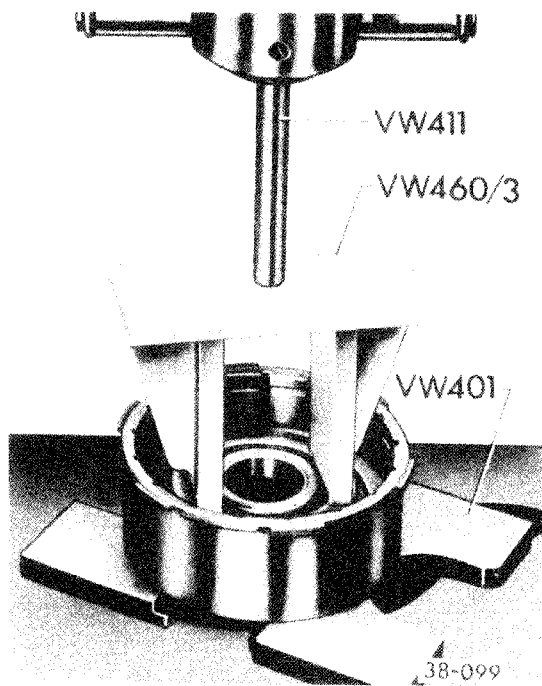


Fig. 1 Circlip (small), removing/installing
— press spring plate down

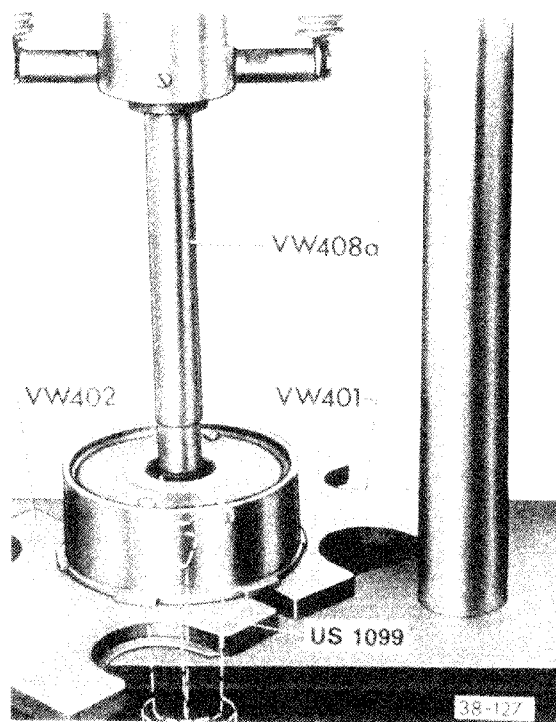


Fig. 2 Bushing in clutch drum, removing
— press out

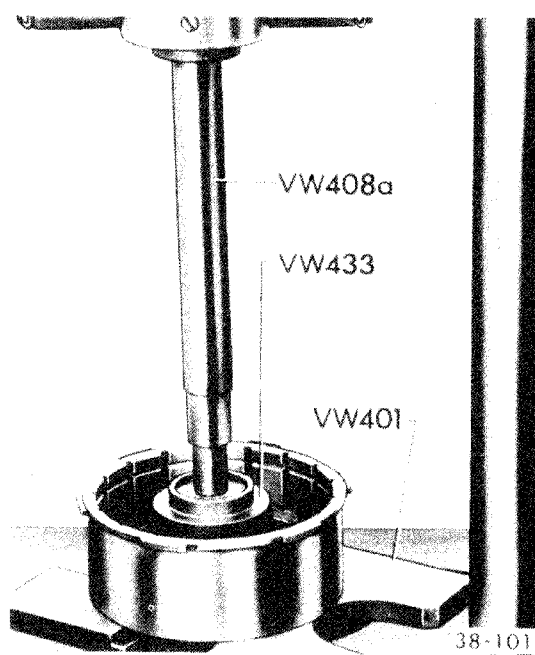


Fig. 3 Bushing in clutch drum, installing
— press bushing in flush

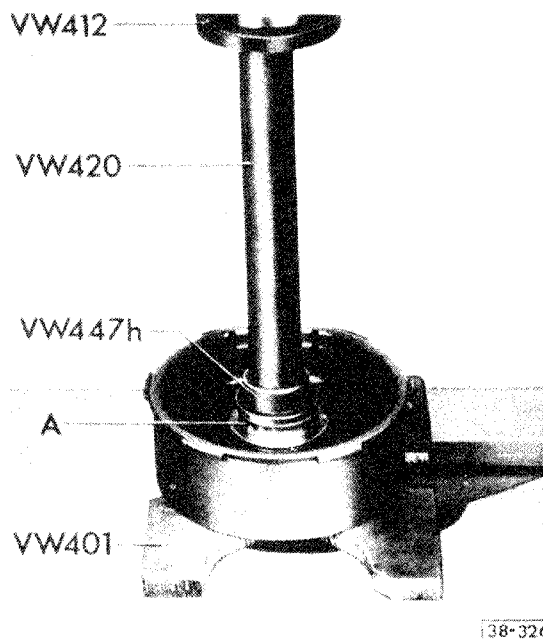


Fig. 4 Bushing in clutch drum, installing
— use old bushing A to press new bushing 1.7 mm (0.067 in.) below top edge

38.20 Direct/Reverse clutch

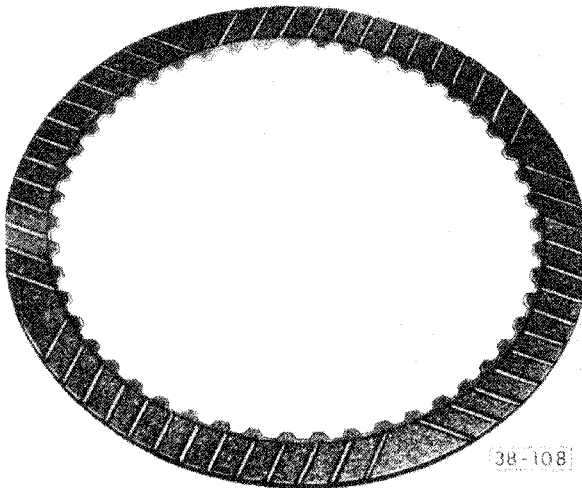


Fig. 5 Inner splined plates, installing

- only use plates with lining marked as shown
- soak new plates in ATF for 15 minutes before installing

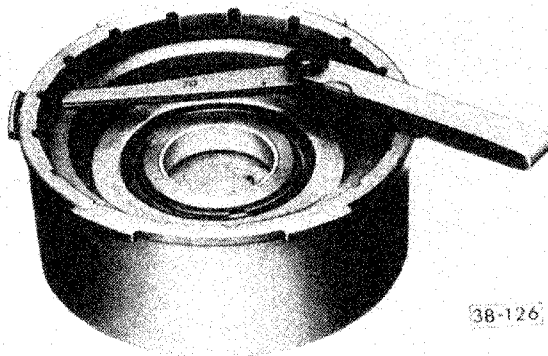


Fig. 6 Direct/Reverse clutch end play, adjusting

- check that play is 2.05–2.50 mm (0.081–0.098 in.)
- adjust if necessary by replacing circlip until correct clearance is obtained

Circlip available

Thickness (mm)	Part No.
1.5	010 323 157 A
1.7	010 323 157 B
2.0	010 323 157
2.3	010 323 157 C
2.5	010 323 157 D

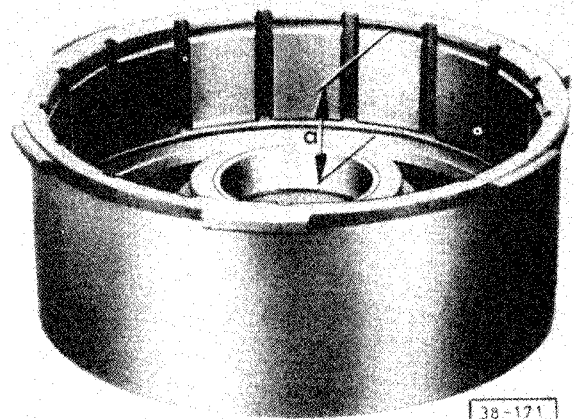


Fig. 7 Clutch drum/Circlip groove, assembling

Note

Different size clutch drums are available. Only install drum with correct dimension

- $a = 31.25 \text{ mm (1.230 in.)}$

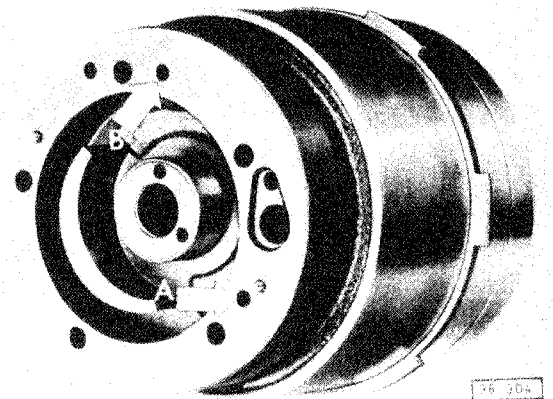
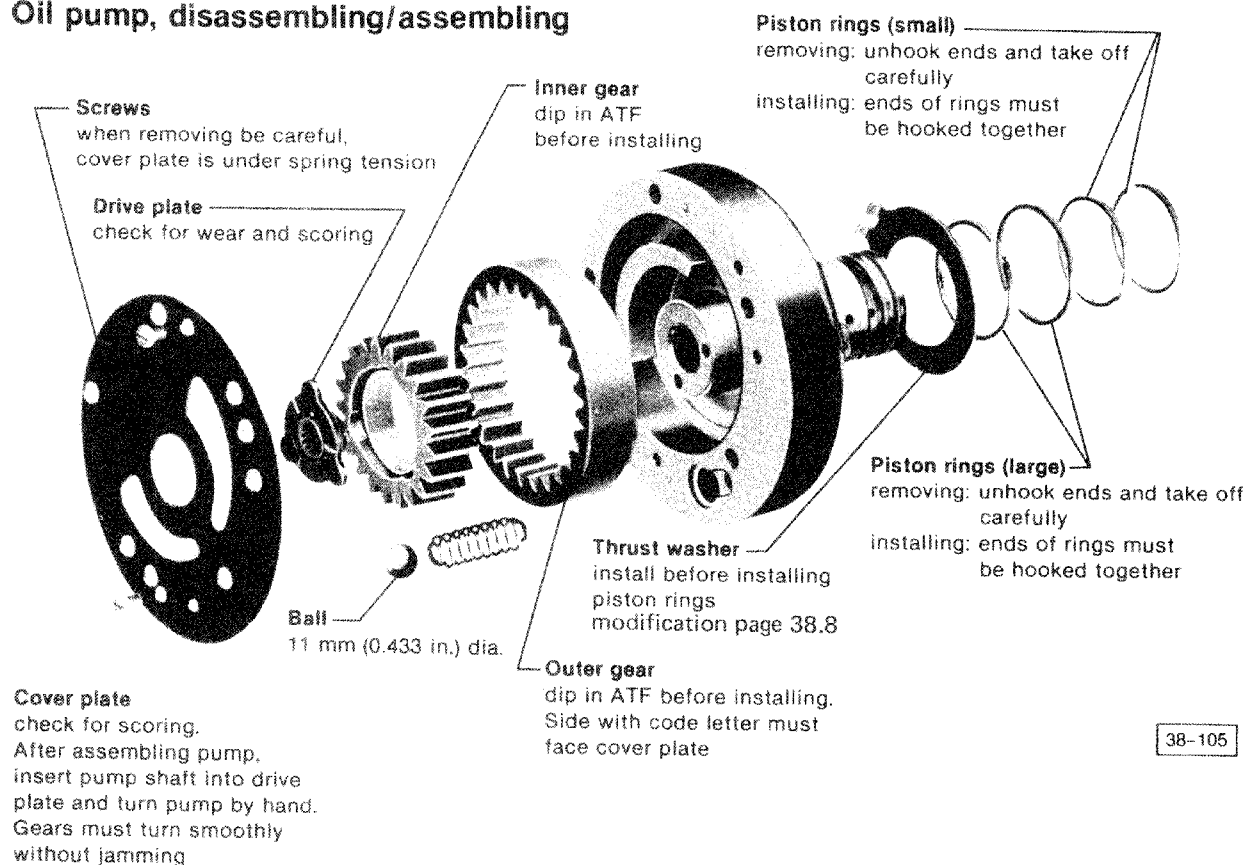


Fig. 8 Direct/Reverse clutch assembly, checking operation

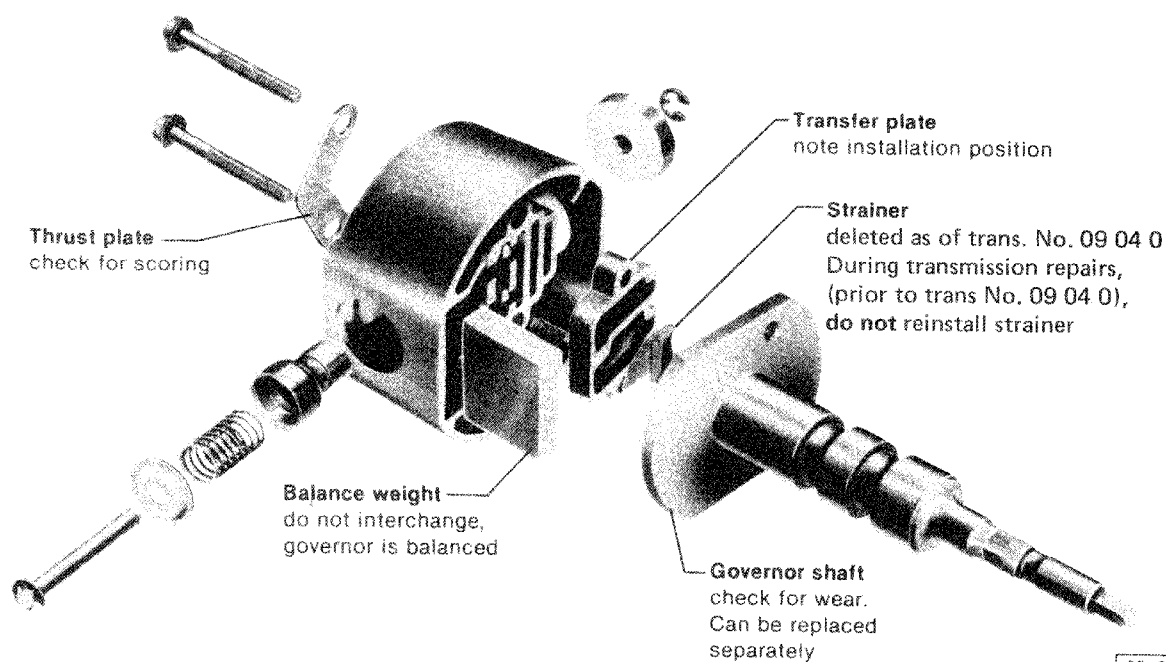
- install both forward clutch and direct/reverse clutch with thrust washers on oil pump
- apply compressed air to port (arrow B)
 - piston must compress clutch plates
 - piston must release plates when compressed air is removed

38 Automatic Transmission-Case, Gears, Shaft

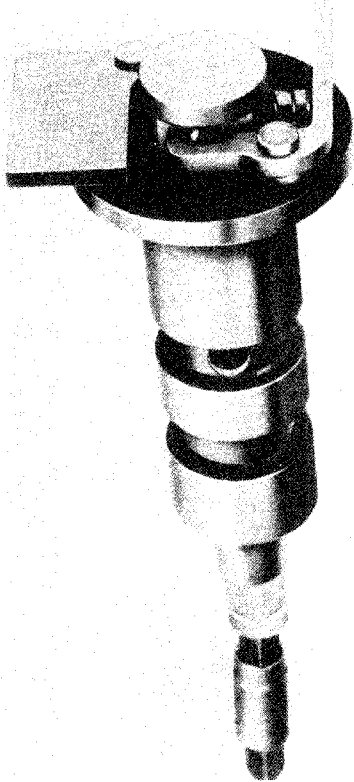
Oil pump, disassembling/assembling



Governor, disassembling/assembling (except for transmission 090—code letters NH)

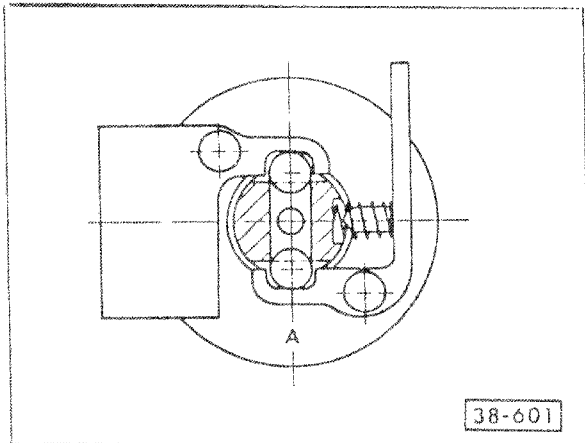


Governor, removing/installing (Transmission 090—code letters NH)



38-510

Flat Governor



38-601

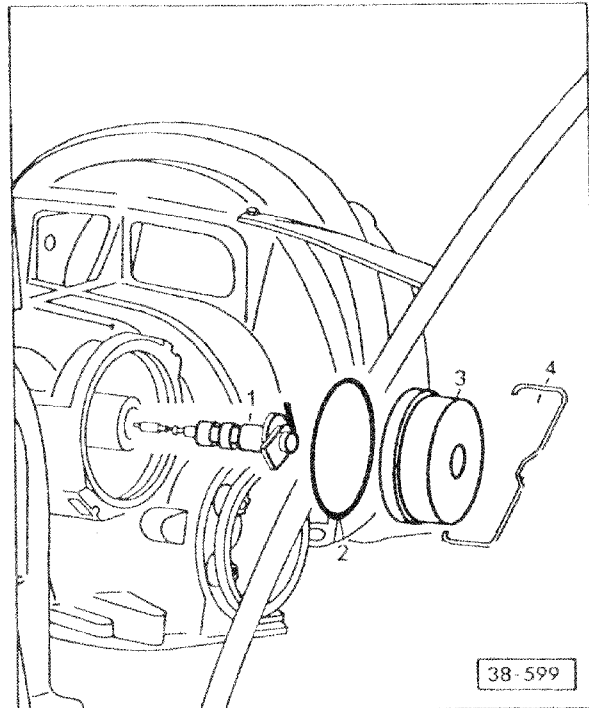
Governor, Identification

Code letters (listed below) are stamped on governor head. New type governors are used only with new type valve bodies (see pages 38.37, 38.38).

Transmission Code Letters	Valve Body Code Letters	Governor Code Letters
NH	FF	A

Note

New governor may only be used with new type valve body. Previous type governor may also be used with new valve body.



38-599

Governor, removing/installing

- 1 — Flat governor
- 2 — O-ring
 - always replace
- 3 — Governor cap
- 4 — Clip
 - must be secure

2nd gear brake band piston, disassembling/assembling

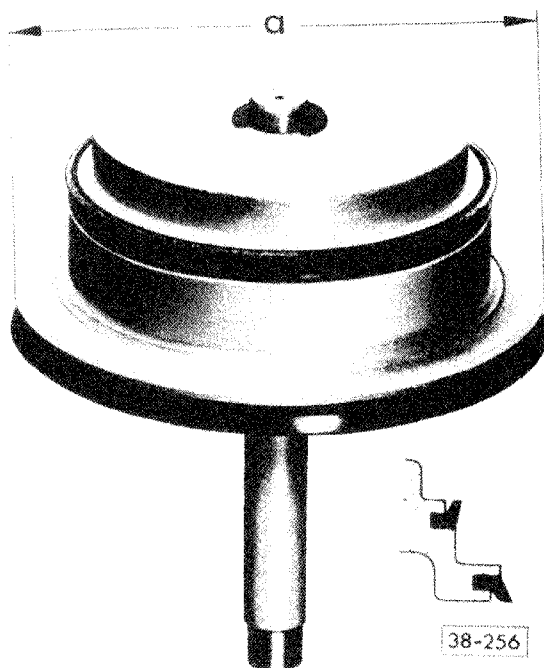
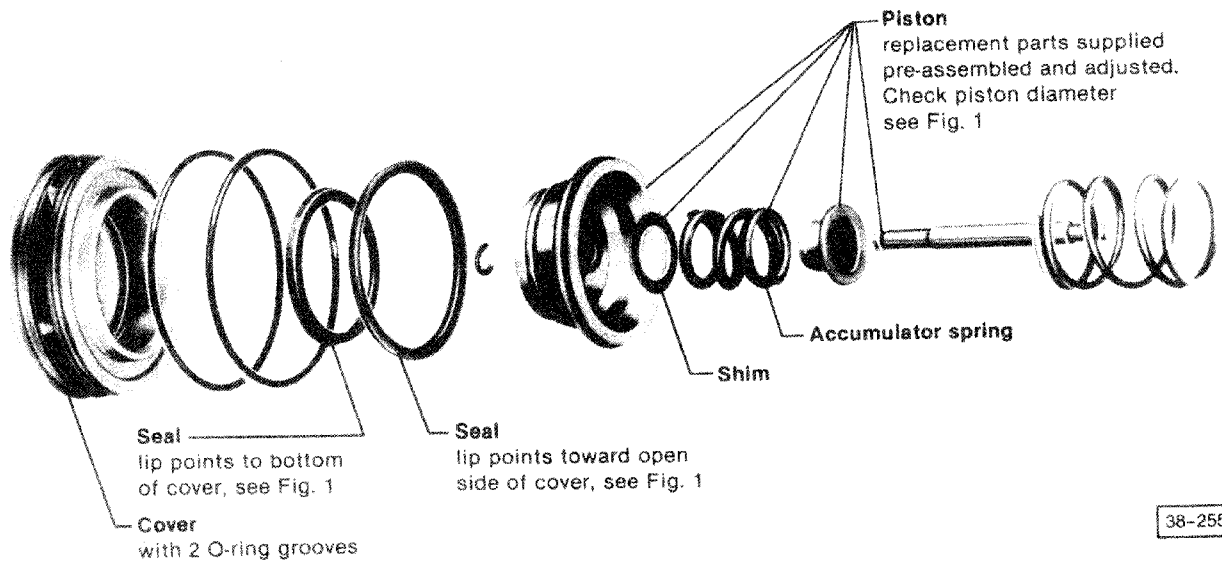


Fig. 1 Piston and piston seals, positions

• a = 96.5 mm (3.799 in.)

38 Automatic Transmission-Case, Gears, Shaft

Valve body, removing/installing

Note

Valve body can be removed and installed with automatic transmission in vehicle. Drain ATF and remove oil pan first

CAUTION

Do not run engine or tow vehicle when oil pan is off or with no oil in transmission

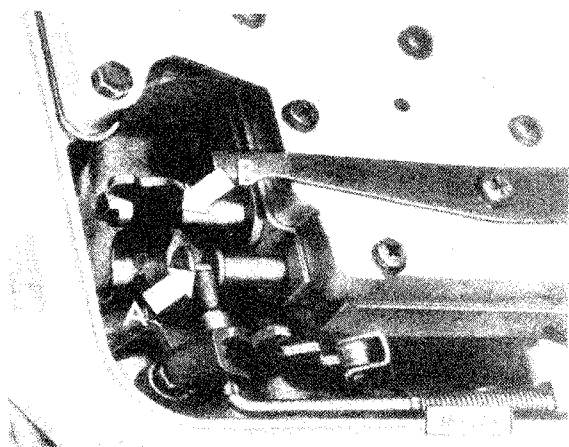
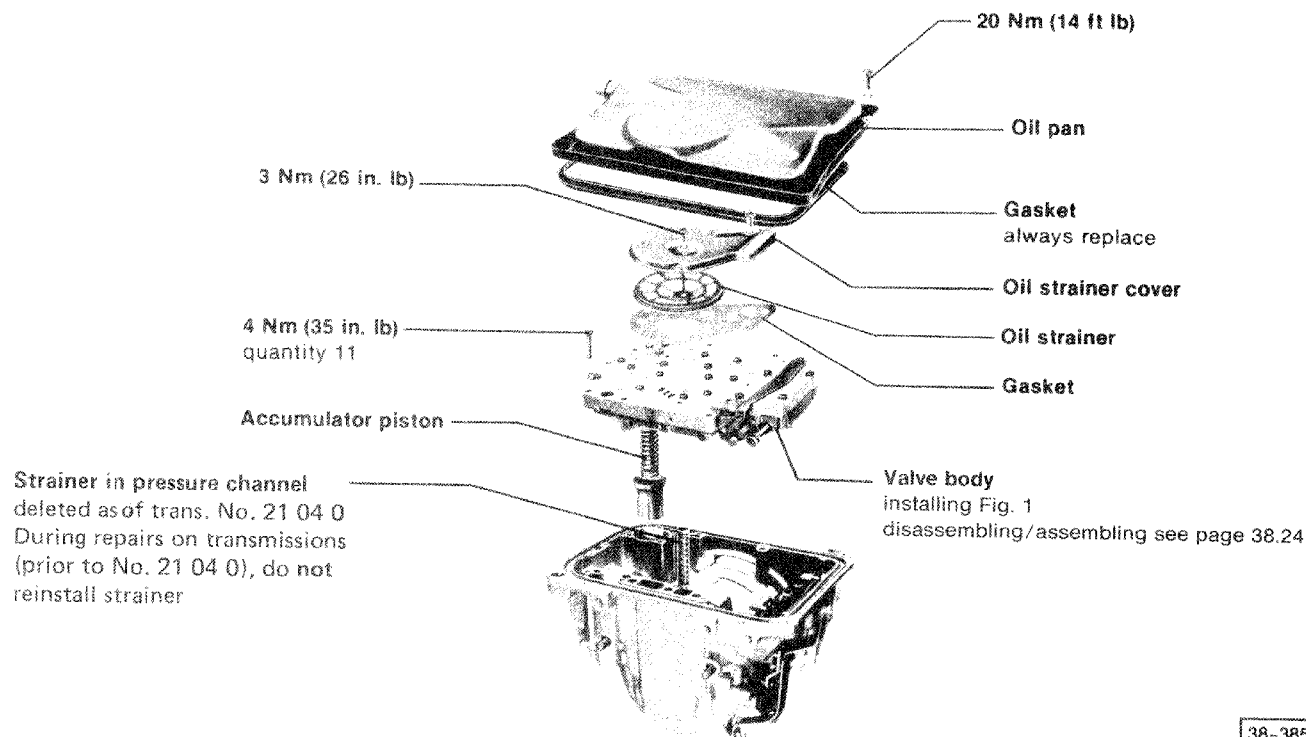


Fig. 1 Valve body, installing

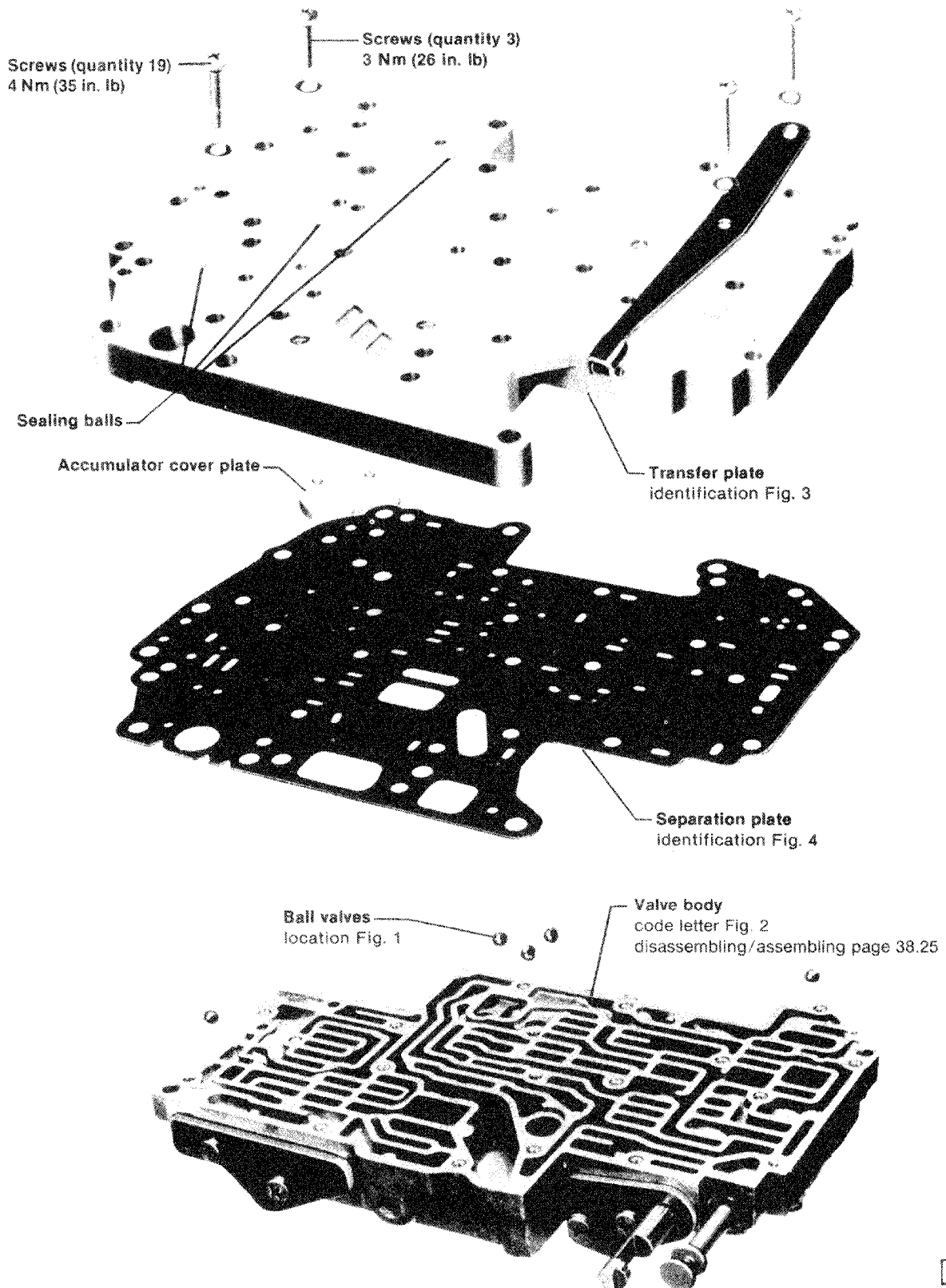
- attach valve body to housing
- connect manual valve (arrow A) and operating lever (arrow B)
- tighten all bolts diagonally

38.25 Valve body

CAUTION

Tighten screws evenly in diagonal sequence

Transmission 090
(except code letters NH)



38-387

Valve body
Separation plate
Transfer plate

38.26

38 Automatic Transmission-Case, Gears, Shaft

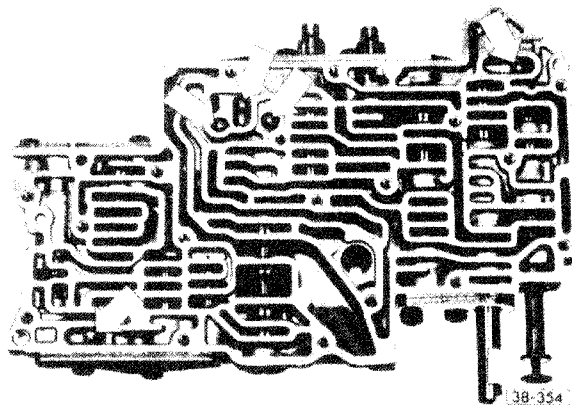


Fig. 1 Ball valves, locations in valve body

- all balls (arrows) 6 mm diameter

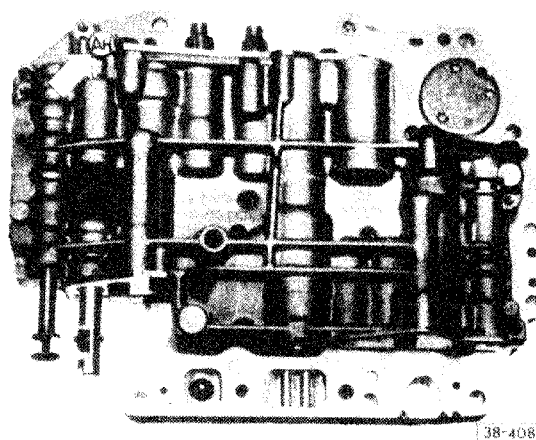


Fig. 2 Valve body, code letter/application

- code letter located on boss (arrow)

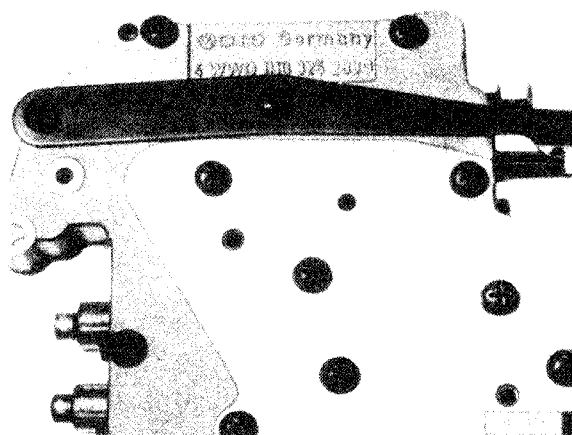


Fig. 3 Transfer plate, identification

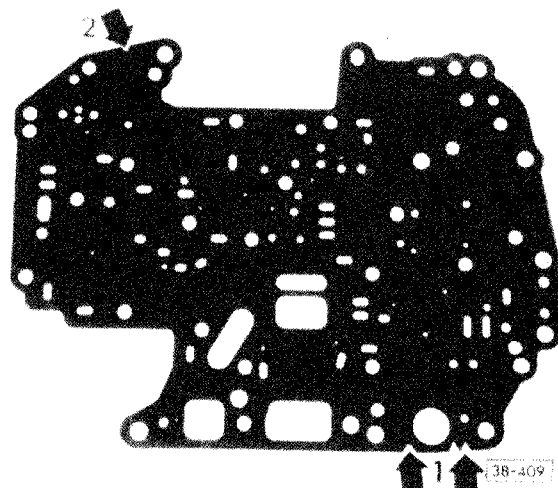
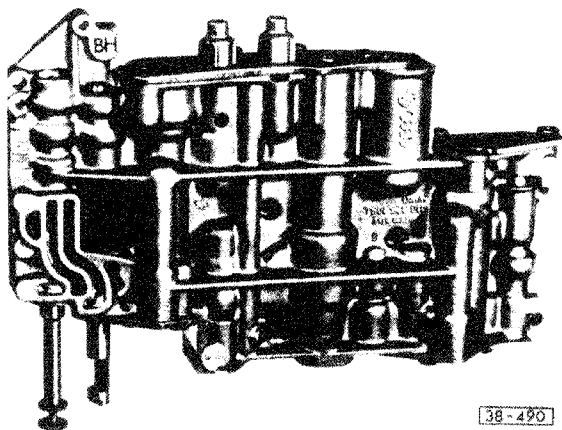


Fig. 4 Separation plate, identification

- at arrows 1 = 3 notches
- at arrow 2 = 1 notch

Automatic transmission

Modifications from transmission No. 17 07 0
(except code letters NH)

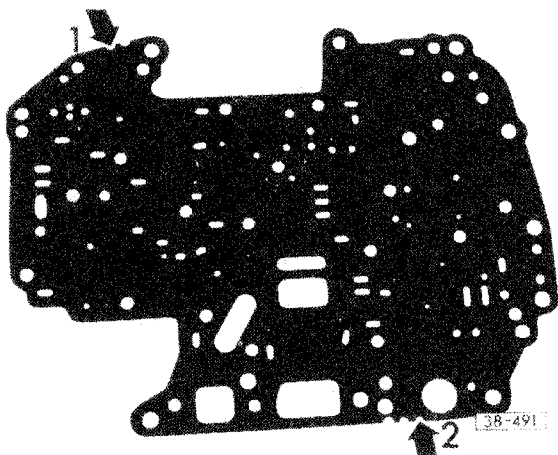


Valve body code letters

Transmission Code letters	Valve body code letters
NG	BH

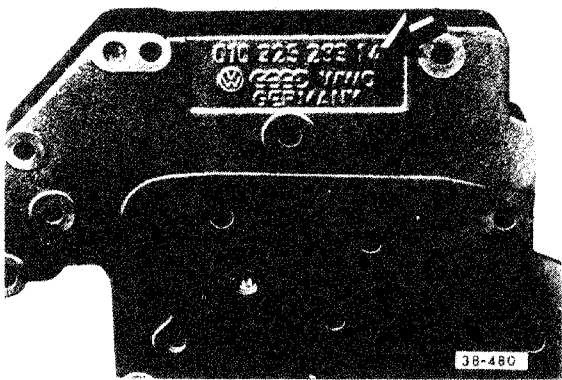
Note

New valve body can be installed in transmissions
from transmission No. 01 06 8

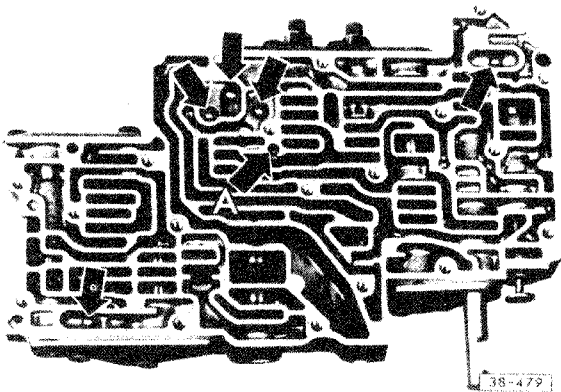


Separation plate marking

- 2 notches at arrow 1
- 3 notches at arrow 2



Transfer plate identification (arrow)



Ball valve locations in valve body

- 5 balls 6 mm diameter (arrows except A)
- 1 ball 3 mm diameter (arrow A)

38 Automatic Transmission-Case, Gears, Shafts

Valve body assembly transmission 090
up to trans. No. 16 07 0
(except code letters NH)

Note

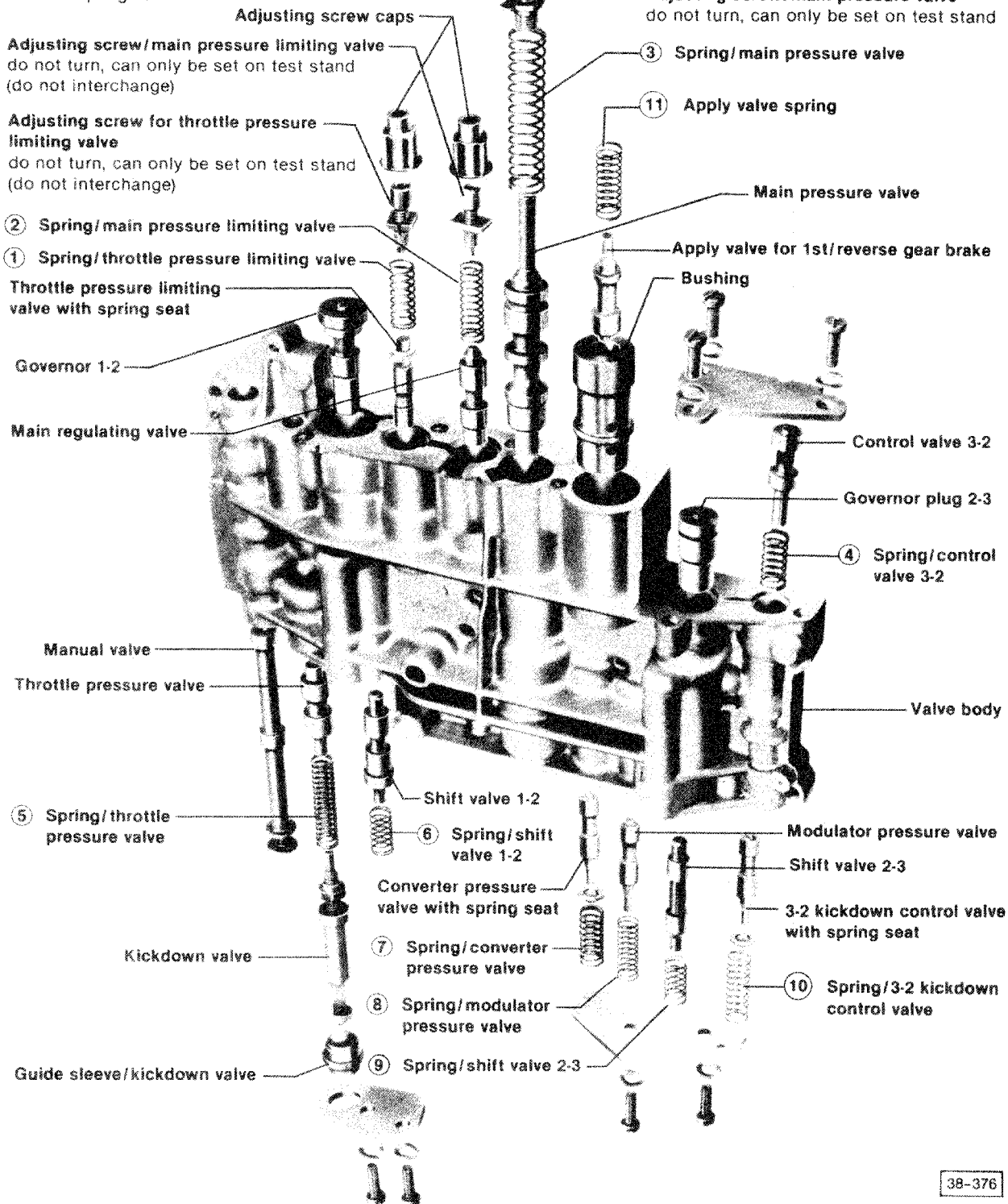
Slight scoring on valves will
not cause operating problems

Spring measurements

see spring table page 38.26
Circled numbers correspond to
those in spring table

CAUTION

Several valve springs have same
dimensions. However, do not interchange
because they have different tolerances



38-376

38.29

Valve body
up to trans. No. 16 07 0
(except code letters NH)

C-6

Spring table

This table allows identification of springs by their dimensions. Coil diameter and free length can vary between new and used springs (due to settling) so check spring wire thickness and number of coils first, as a means of identifying springs. If this is not enough, also use inner coil diameter and free length

CAUTION

Several valve springs have similar dimensions. However, they must not be interchanged because they have different tolerances

Transmission 090 up to No. 16 07 0 and transmission 090—code letters NH

Description	Number of coils	Wire thickness mm (in.)	Free length ¹ mm (in.)	Inner diameter ² of coil mm (in.)
① Spring/throttle pressure limiting valve	14 1/2	1.1 (0.043)	35.3 (1.389)	7.7 (0.303)
② Spring/main pressure limiting valve	11	1.2 (0.047)	32.4 (1.275)	7.7 (0.303)
③ Spring/main pressure valve	16 1/2	1.5 (0.059)	77.0 (3.031)	11.9 (0.468)
④ Spring/control valve 3-2	12 1/2	1.0 (0.039)	32.4 (1.275)	7.7 (0.303)
⑤ Spring/throttle pressure valve	16	1.25 (0.049)	43.4 (1.708)	7.75 (0.035)
⑥ Spring/shift valve 1-2 except code letters NH	9 1/2	0.8 (0.031)	26.0 (1.024)	8.2 (0.323)
Spring/shift valve 1-2 code letters NH only	8 1/2	0.9 (0.035)	28.8 (1.134)	8.1 (0.318)
⑦ Spring/converter pressure valve	8 1/2	1.25 (0.049)	22.2 (0.874)	7.7 (0.303)
⑧ Spring/modulator pressure valve	11 1/2	0.8 (0.031)	28.6 (1.126)	7.75 (0.305)
⑨ Spring/shift valve 2-3	9 1/2	0.8 (0.031)	26.0 (1.024)	8.2 (0.323)
⑩ Spring/kickdown control valve 3-2	11 1/2	0.9 (0.035)	28.4 (1.118)	8.1 (0.318)
⑪ Spring/apply valve 1st/reverse gear brake	11 1/2	0.9 (0.035)	28.4 (1.118)	8.1 (0.318)

¹Free length can vary due to tolerances and settling

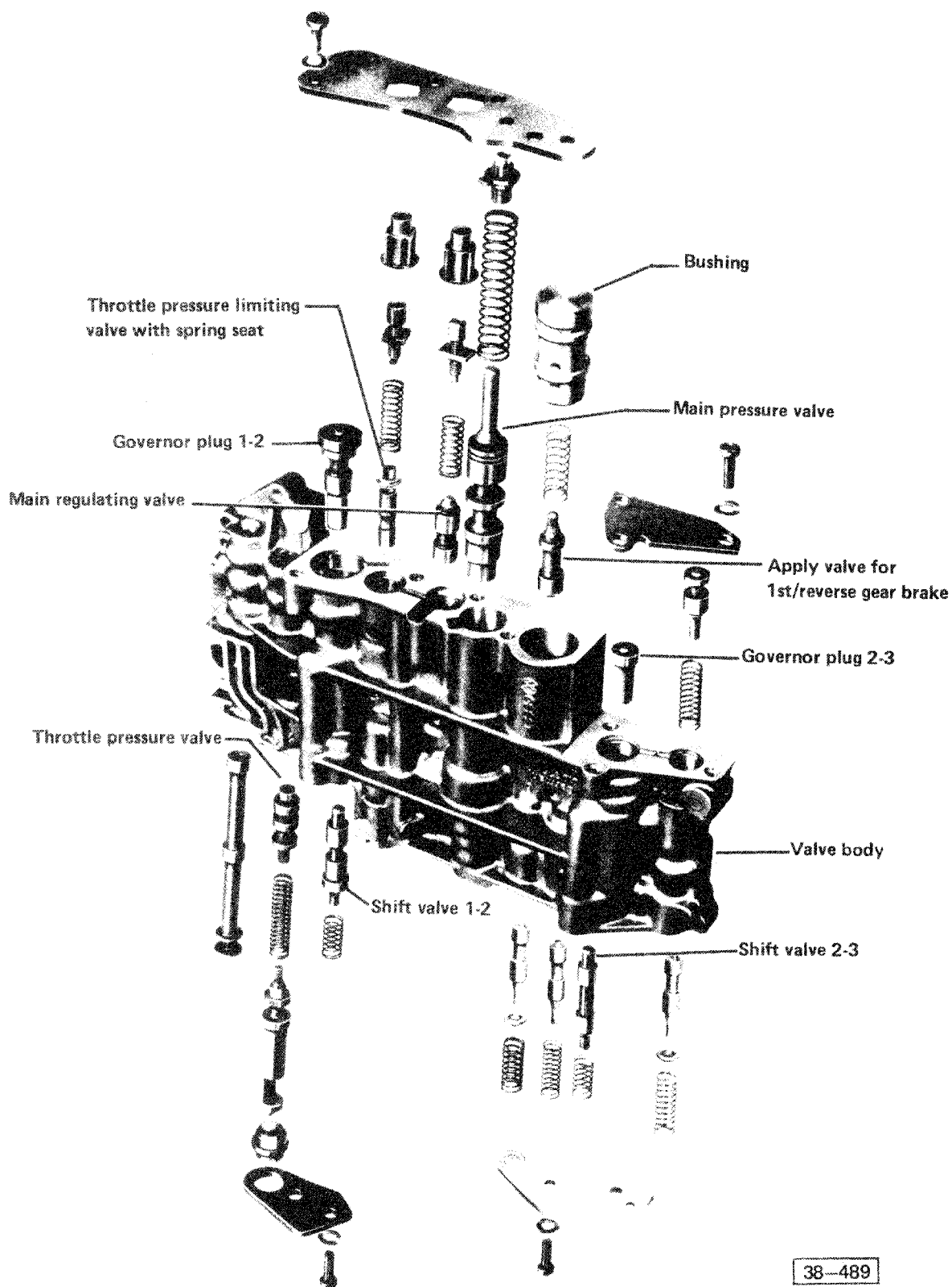
²Inner coil diameter is within a tolerance of ± 0.3 mm (0.012 in.)

38 Automatic Transmission-Case, Gears, Shaft

Valve body

Modifications from transmission No. 17 07 0

(except transmission 090— code letters NH)



38-489

38.31

Valve body

from trans. No. 17 07 0

(except code letters NH)

Automatic transmission

Modifications from transmission NO. 17 07 0
(except transmission 090—code letters NH)

Spring table

This table allows identification of springs by their dimensions. Coil diameter and free length can vary between new and used springs (due to settling) so check spring wire thickness and number of coils first, as means of identifying springs. If this is not enough, also use inner coil diameter and free length

CAUTION

Several valve springs have similar dimensions. However, they must not be interchanged because they have different tolerances

Description	Coils	Wire thickness mm	Free length ⁽¹⁾ mm	Inner diameter ⁽²⁾ of coil mm
Spring/throttle pressure limiting valve	14.5	1.1	37.9	7.7
Spring/main pressure limiting valve	12.5	1.2	27.5	7.6
Spring/main pressure valve	16.5	1.4	69.2	11.9
Spring/control valve 3—2	16.5	1.1	44	7.75
Spring/throttle pressure valve	11.5	0.8	28.6	7.75
Spring/shift valve 1—2	6.5	0.9	19.9	8.1
Spring/shift valve 2—3	8.5	0.8	17.4	6.95
Spring/modulator pressure valve	12.5	1.0	32.4	7.7
Spring/converter pressure valve	8.5	1.25	22.2	7.7
Spring/kickdown control valve 3—2	11.5	0.9	28.4	8.1
Spring/apply valve 1st/reverse gear brake	10.5	0.63	36.3	9.0

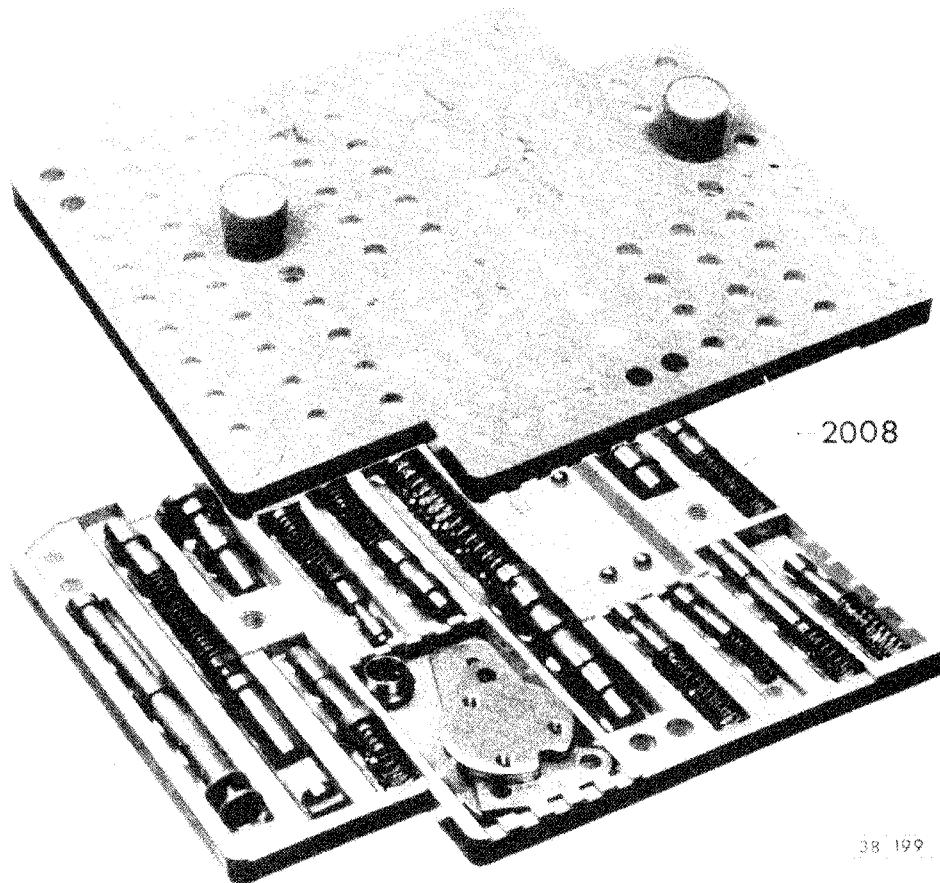
(1) Free length can vary due to tolerances and settling

(2) Inner coil diameter is within tolerance of ± 0.3 mm

Spring table
from trans. No. 17 07 0
(except code letters NH)

38.32

38 Automatic Transmission-Case, Gears, Shafts



Valve body, disassembling/cleaning

Note

Valve body should only be disassembled for cleaning or when transmission failure was caused by burnt friction linings or excessively dirty ATF. If ATF is still fairly clean, place the complete valve body in cleaning solution and then dry it afterwards with compressed air.

Storage tray, tool number 2008, is used to store all valves, springs and screws from valve assembly.

Tray outer shape corresponds to shape of valve body.

To be sure parts are reinstalled in their original location, they should be placed in storage tray.

Ball valves can be stored in space provided for bolts

- remove rear end plate, take out valves and springs one after another and place them in tray
- remove end plate from other side and repeat procedure
- place lid on tray
- immerse tray complete with parts in cleaning solution. Dry with compressed air. Do not use water, fluffy rags or cloths when cleaning parts

Valve body, assembling

Note

Lubricate all parts with ATF when assembling and check for free movement. Valves should slide under their own weight.

Valves which are slightly scored may be reused. This will not affect operation of transmission.

3-2 kickdown control valve must be cleaned separately, because those parts cannot be put into storage tray.

All parts must be completely clean.

Valves and springs must be put back into same holes from which they were removed

- insert springs and valves into one side in locations shown in exploded view (see page 38.25) and then install end plate before proceeding with other side

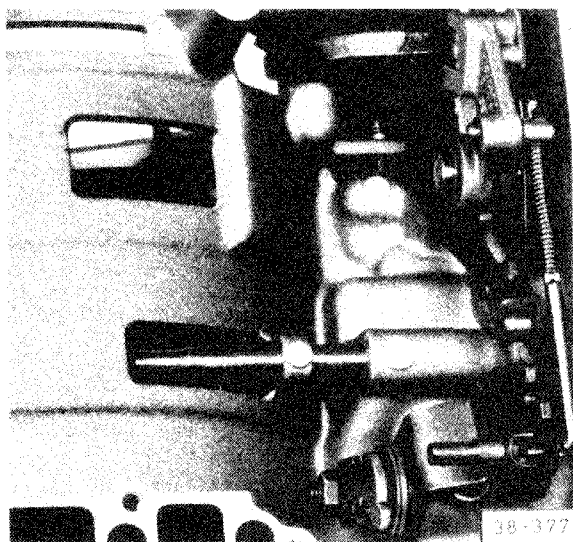
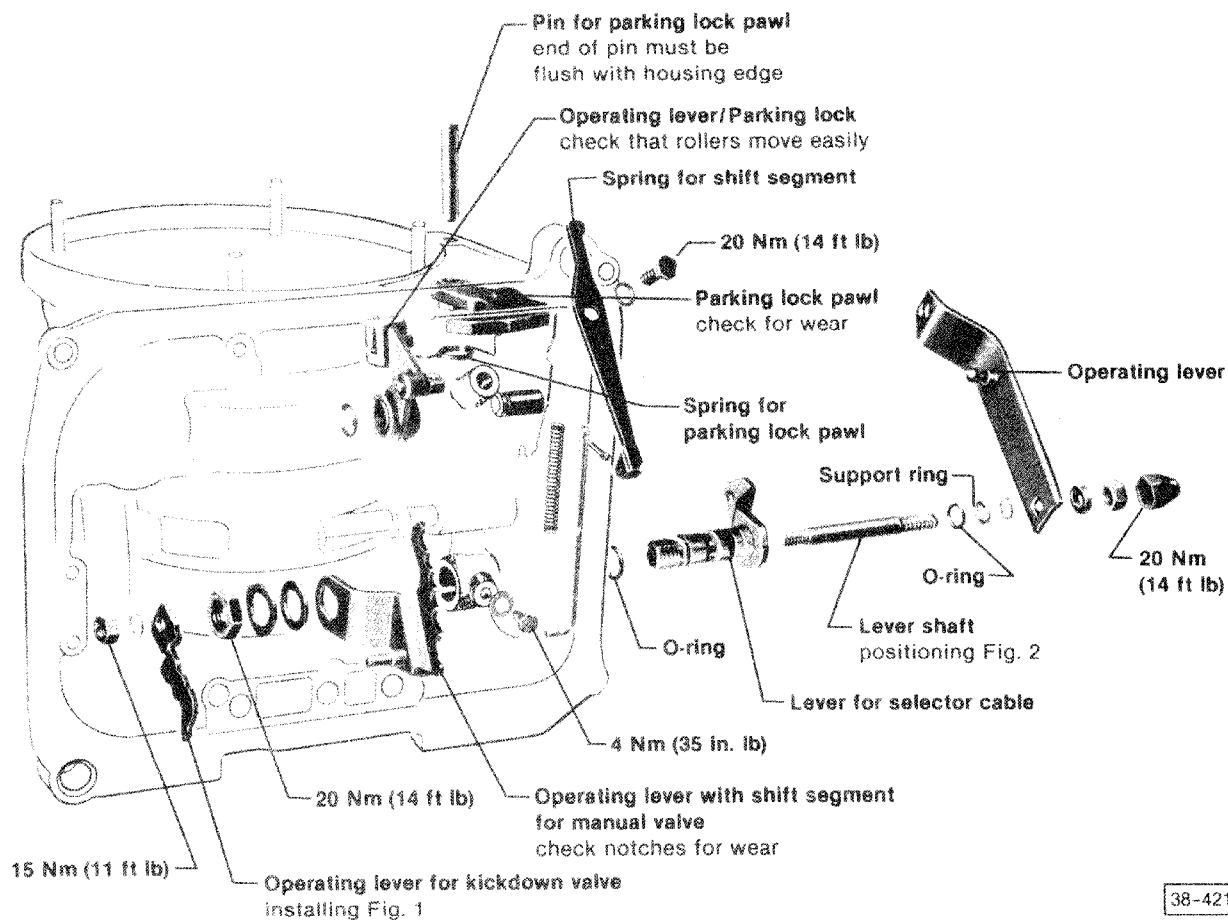


Fig. 1 Operating lever for kickdown valve, installing

- angled ends of operating lever points toward center of transmission

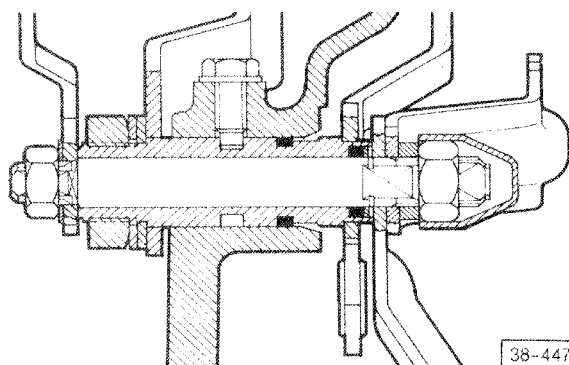
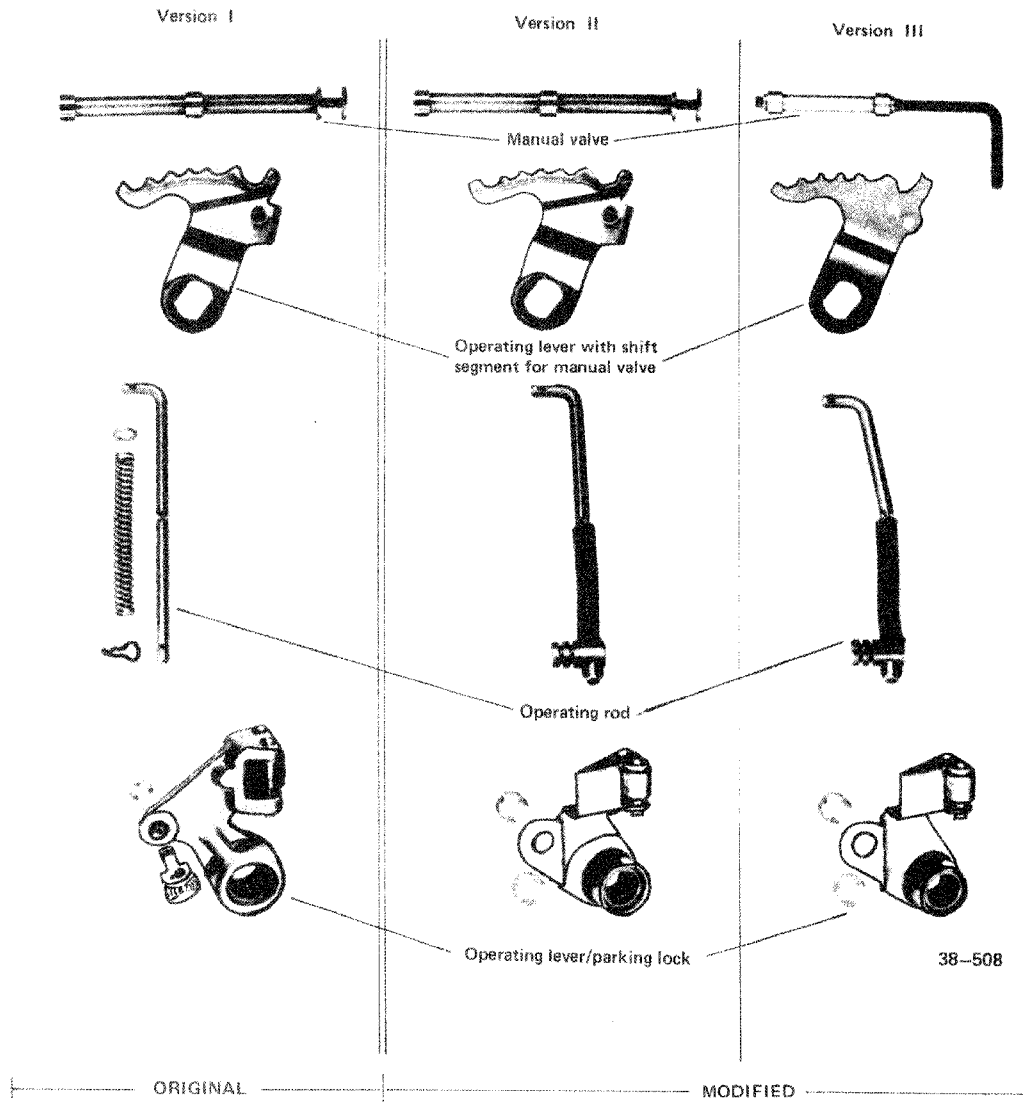


Fig. 2 Lever shaft, positioning

38 Automatic Transmission-Case, Gears, Shafts

Manual valve, operating rod and parking lock, modifications

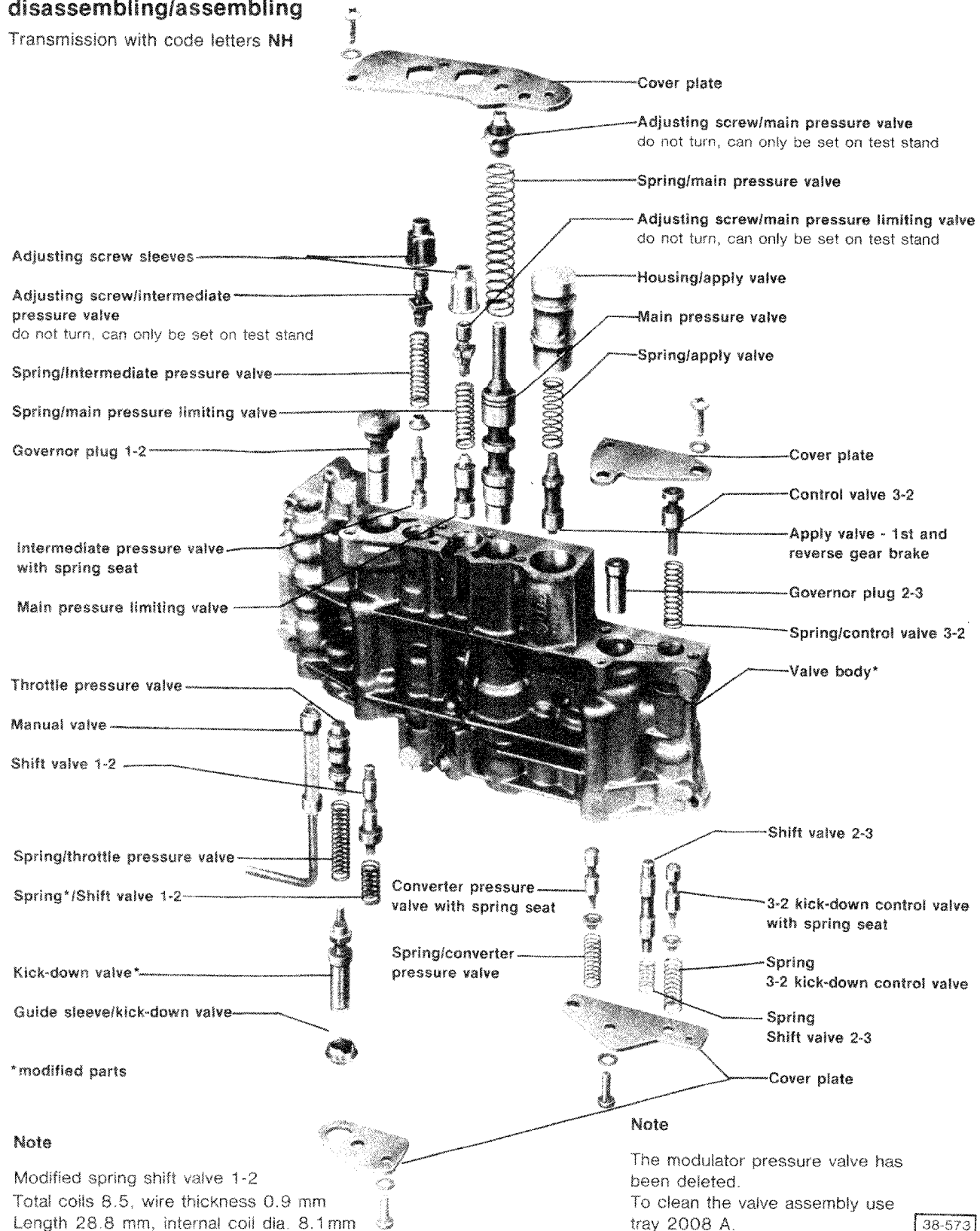


CAUTION

Only install parts combinations illustrated for each respective version

Valve Body Assembly, disassembling/assembling

Transmission with code letters NH



Note

Modified spring shift valve 1-2
Total coils 8.5, wire thickness 0.9 mm
Length 28.8 mm, internal coil dia. 8.1 mm

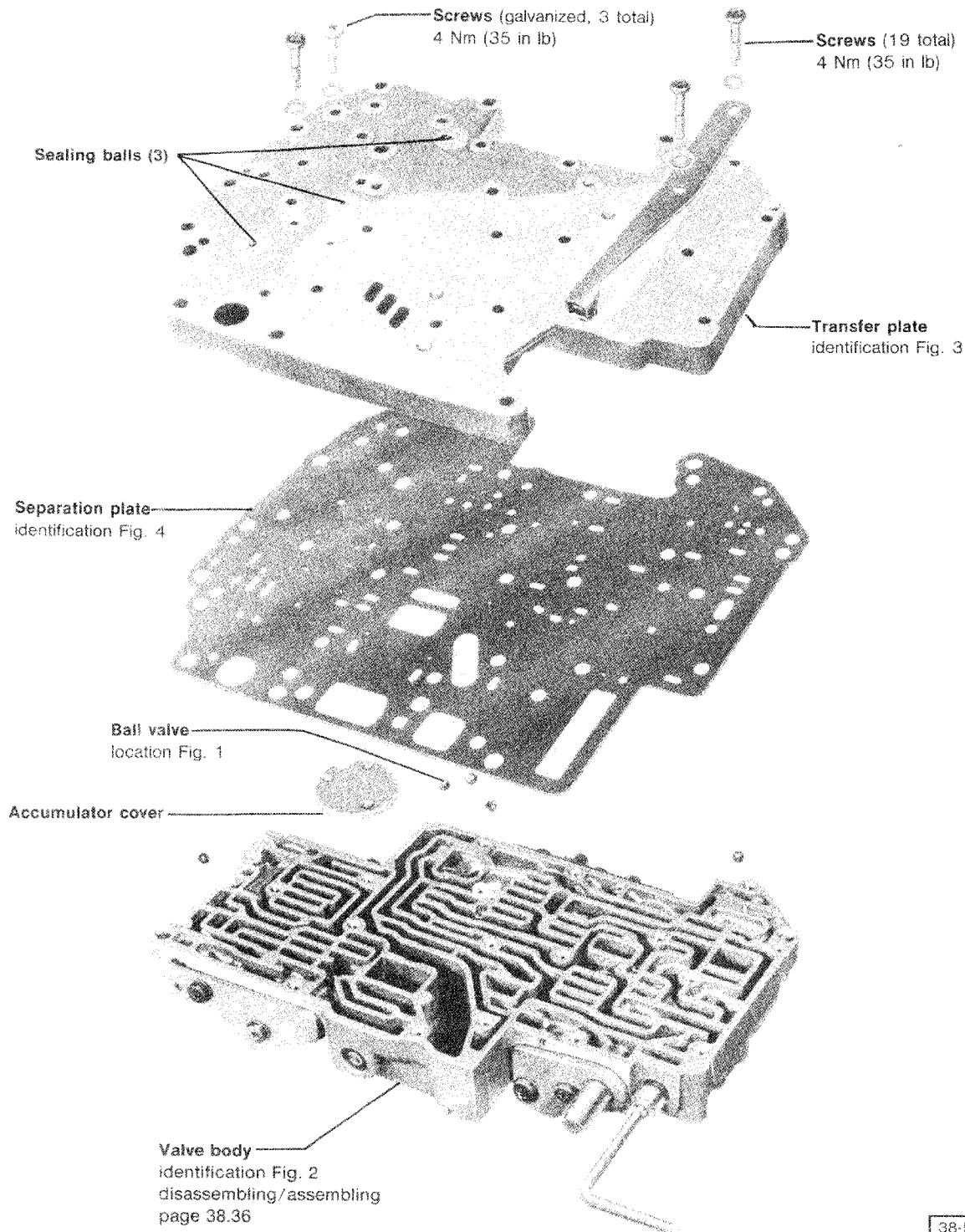
38 Automatic Transmission—Case, Gears, Shafts

Transfer Plate, Separation Plate, Valve Body

Transmission with code letters NH
Modified valve assembly and separation plate

CAUTION

Tighten screws evenly when assembling



38-583

38.37

Transfer plate, Separation plate
Valve body
(trans. 090—code letters NH only)

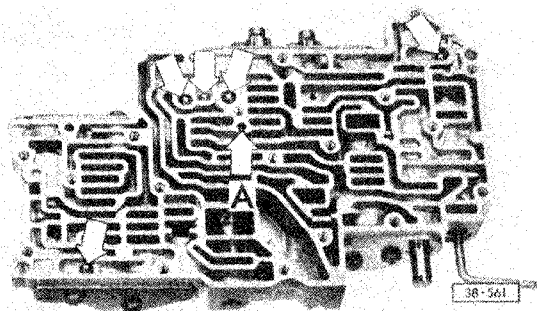


Fig. 1 Ball valves, location

- 1 ball (arrow A) 3 mm dia.
- 5 balls (arrows) 6 mm dia.

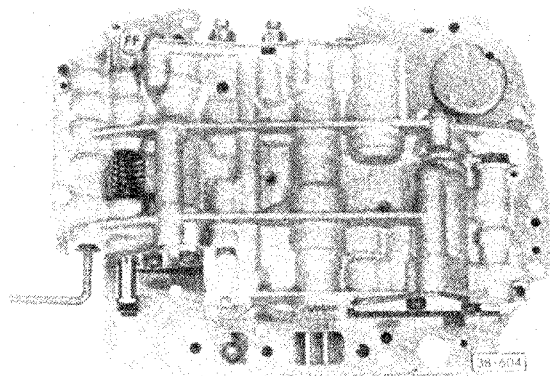


Fig. 2 Valve body, identification

- code letters on boss (arrow): FF

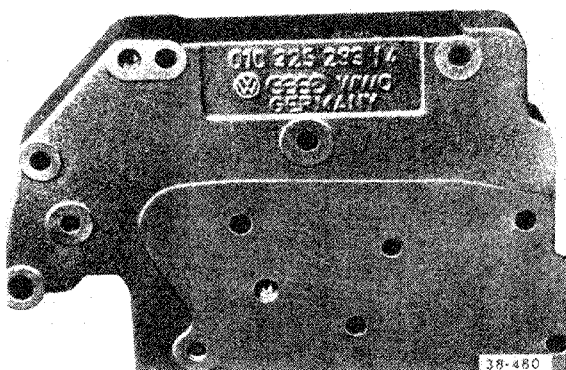


Fig. 3 Transfer plate, identification

- Part No. 010 325 283 J

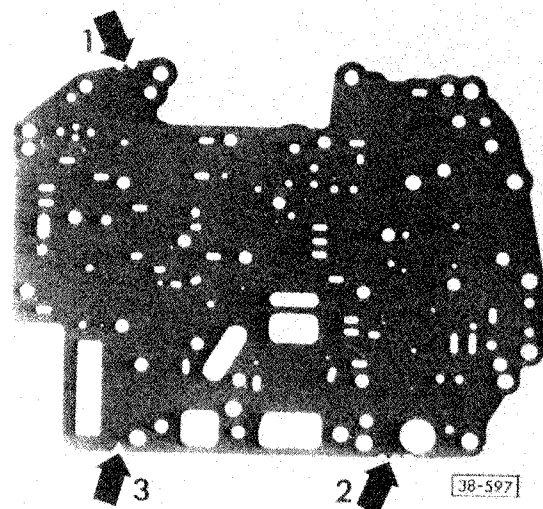


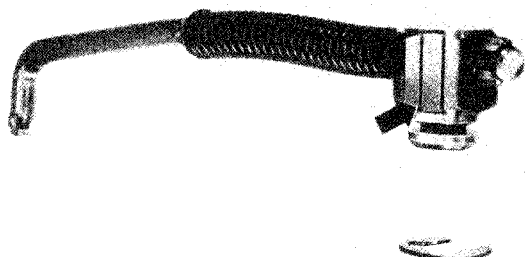
Fig. 4 Separation plate, identification

- 2 notches at arrow 1
- 3 notches at arrow 2
- 1 notch at arrow 3

38 Automatic Transmission—Case, Gears, Shafts

Parking lock rod and Kickdown lever, modification

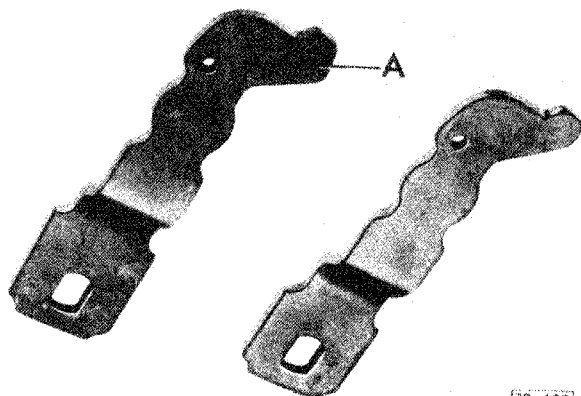
Transmission 090—code letters NH only



38-603

Parking lock operating rod, modification

With modified operating rod (on hexagon, arrow), parking lock engagement lever is secured with only one circlip



38-602

Kickdown valve operating lever, modification

Kickdown valve operating lever has been flattened slightly at contact surface A

Note

New kickdown valve operating lever can be installed in previous transmissions, but earlier-type operating lever must not be installed in transmissions with new kickdown valve.