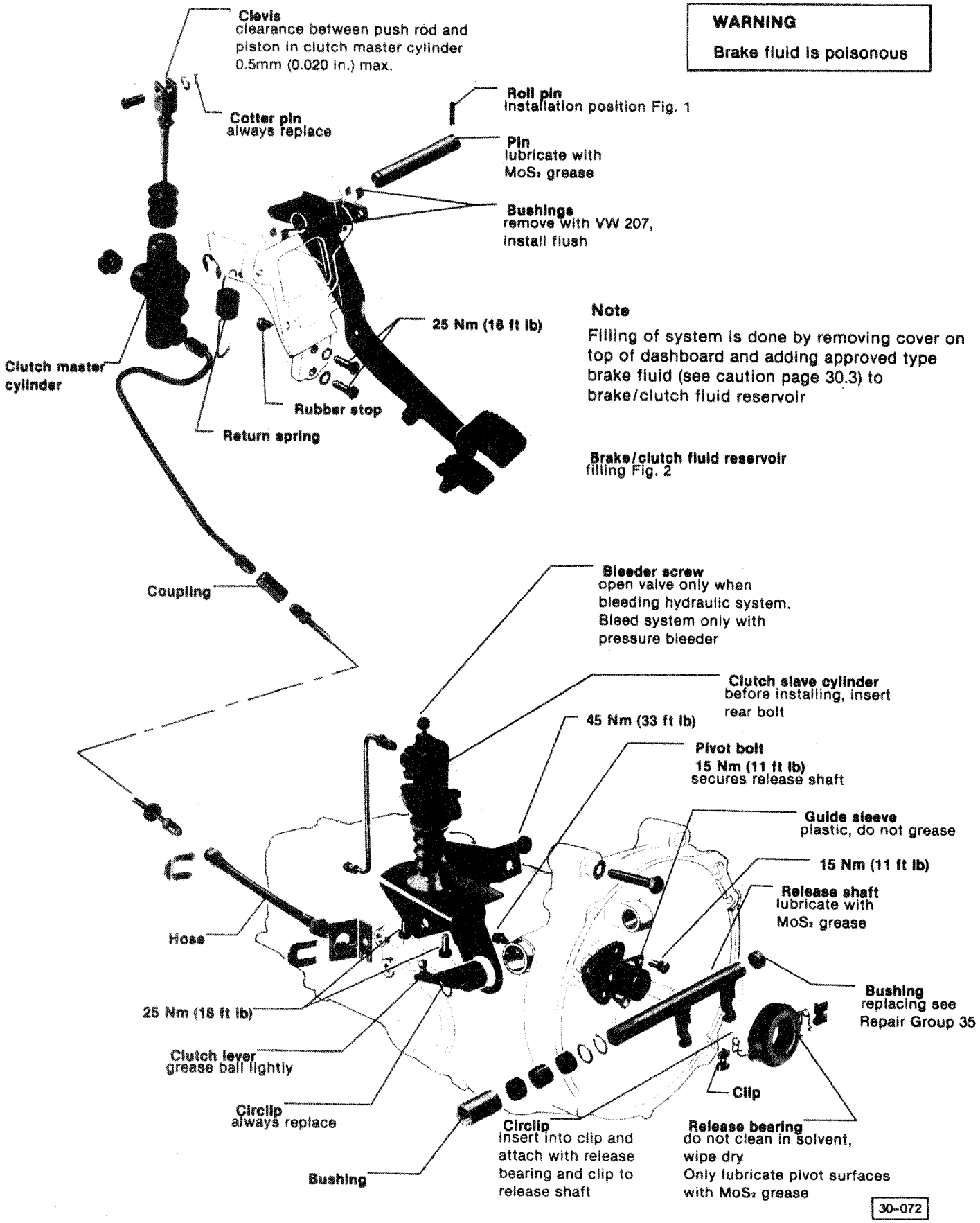
# Clutch Controls

## Quick Data

clutch adjustment .....not adjustable
pressure plate/flywheel .....25 Nm/18 ft lb

## Index


Clevis
clearance between push rod and piston in clutch master cylinder 0.5mm (0.020 in.) max.
Cotter pin
always replace
Roll pin
installation position Fig. 1
Pin
lubricate with MoS2 grease
Bushings
remove with VW 207, install flush
25 Nm (18 ft lb)
Clutch master cylinder
Rubber stop
Return spring
WARNING
Brake fluid is poisonous
Note
Filling of system is done by removing cover on top of dashboard and adding approved type brake fluid (see caution page 30.3) to brake/clutch fluid reservoir
Brake/clutch fluid reservoir
filling Fig. 2
Coupling
Bleeder screw
open valve only when bleeding hydraulic system. Bleed system only with pressure bleeder
Clutch slave cylinder
before installing, insert rear bolt
45 Nm (33 ft lb)
Pivot bolt
15 Nm (11 ft lb)
secures release shaft
Guide sleeve
plastic, do not grease
15 Nm (11 ft lb)
Release shaft
lubricate with MoS2 grease
Hose
25 Nm (18 ft lb)
Bushing
replacing see Repair Group 35
Clutch lever
grease ball lightly
Clip
Circlip
always replace
Circlip
insert into clip and attach with release bearing and clip to release shaft
Release bearing
do not clean in solvent, wipe dry
Only lubricate pivot surfaces with MoS2 grease
Bushing
30-072

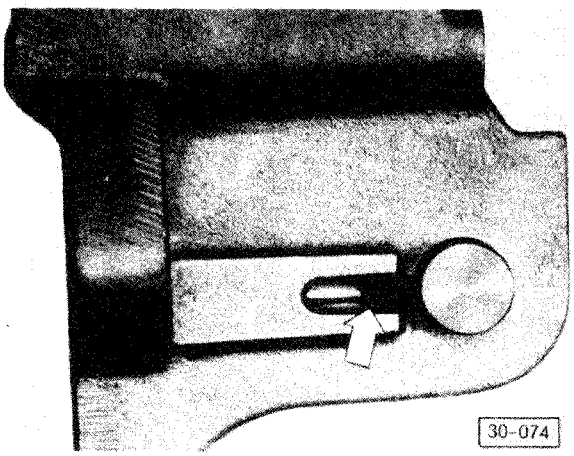



**Fig. 1 Roll pin, installation position**

- roll pin must be engaged in groove (arrow) on side of bracket

**CAUTION**

Brake fluid must not come into contact with paint.
Brake fluid absorbs moisture from air and must be replaced every 2 years.
Only use new unused DOT 3 or DOT 4 brake fluid according to MOTOR VEHICLE SAFETY STANDARD 116. Do not add or mix DOT 5 silicone type brake fluid with brake fluid in car, as severe component corrosion may result. Such corrosion could lead to clutch and brake system failure

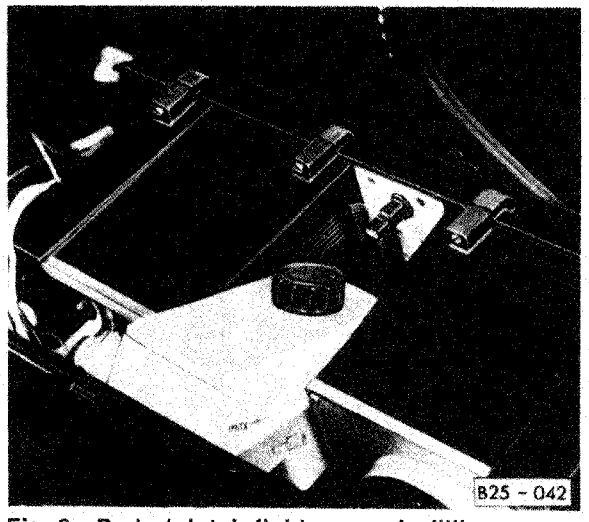



**Fig. 2 Brake/clutch fluid reservoir, filling**

— grasp two recesses on back of dashboard cover and pull up
— fill with brake fluid (see above caution) until level is between "MAX" and "MIN"
— replace cover by inserting front edge first then press cover down firmly

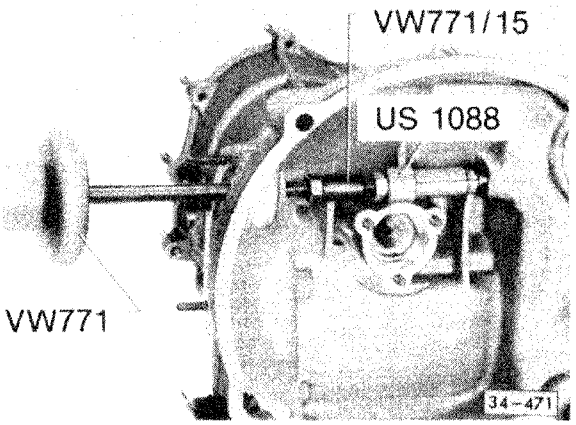



**Fig. 3 Release shaft bushing, removing**

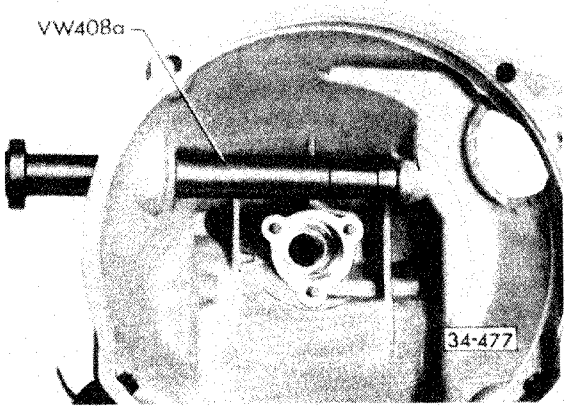
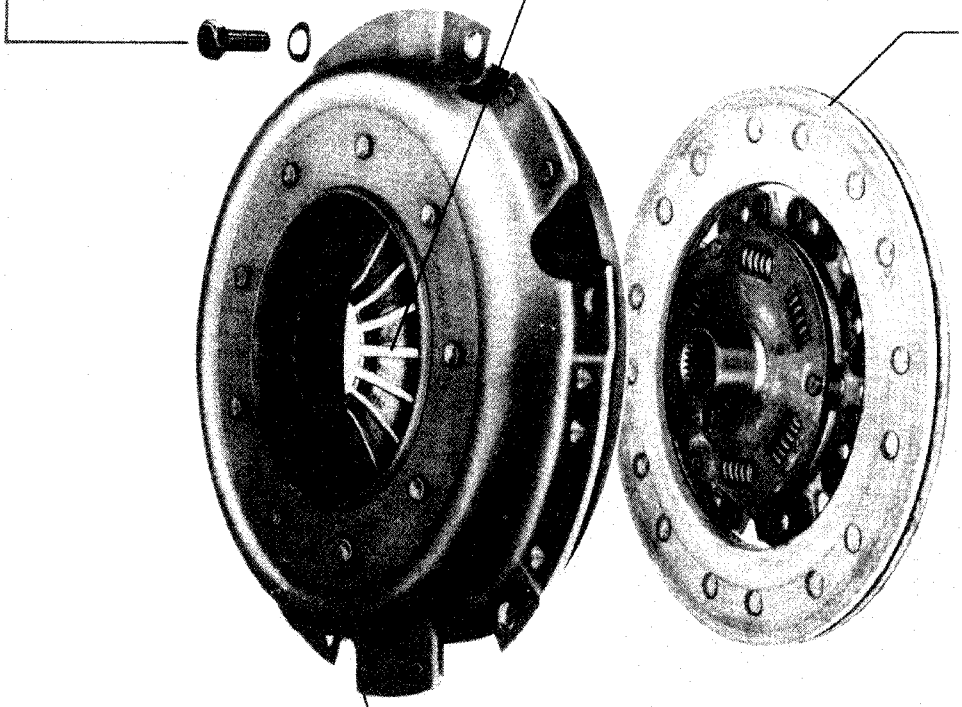



**Fig. 4 Release shaft bushing, installing**

— drive in flush

**Note**

Only transmission must be removed for clutch repairs




**WARNING**

Friction materials such as brake and clutch linings or brake pads may contain asbestos fibers.

Do not create dust by grinding, sanding, or by cleaning with compressed air.

Avoid breathing asbestos fibers and asbestos dust.

Breathing asbestos may result in serious diseases, such as asbestosis or cancer.

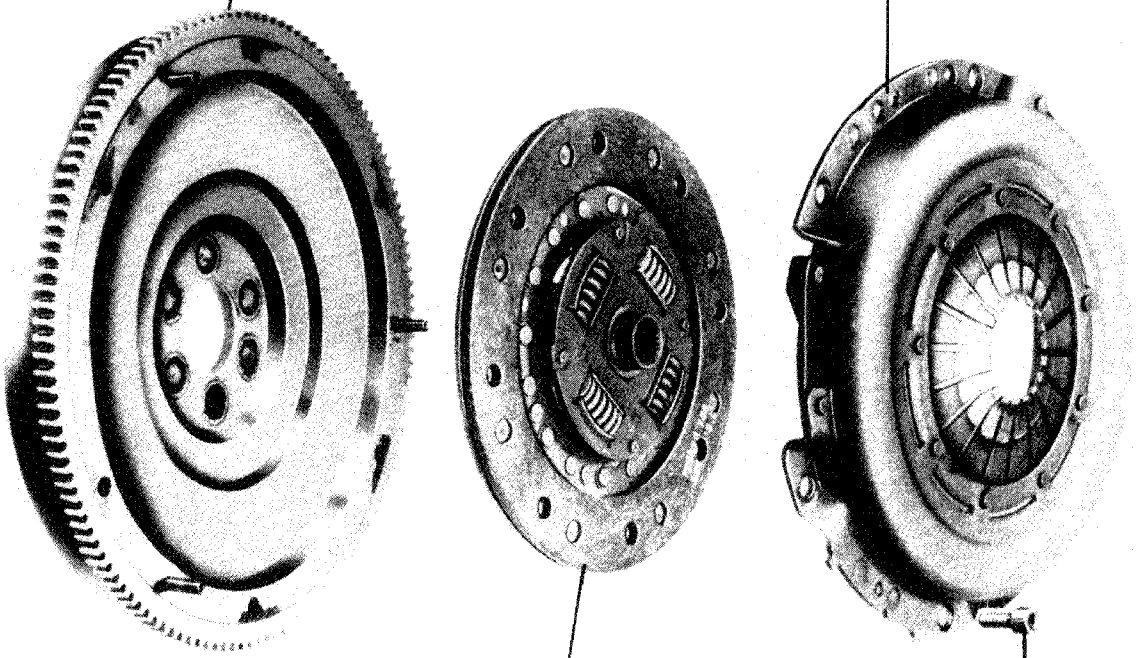
Breathing asbestos may cause severe injury and death.

**Note**

For clutch repairs, transmission must be removed

**Flywheel**
check for wear and tightness of dowel pins (essential for correct position of TDC mark on pressure plate)

**Clutch pressure plate**
removing/installing Fig. 2
checking Fig. 7 and Fig. 8



**Clutch disc**
centering Fig. 2
checking Fig. 9
installation position: spring cage faces pressure plate

**25 Nm (18 ft lb)**
loosen and tighten by stages and in diagonal sequence
—install hexagon bolts or socket head screws M 8 x 16 **without spring washer;** or
—install hexagon bolts or socket head screws M 8 x 18 **with spring washer**
—use only bolts or screws of **same length**

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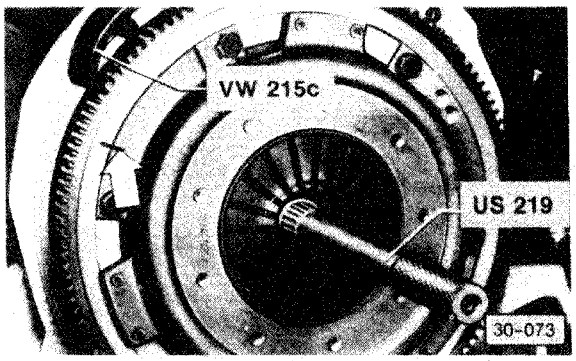


Fig. 1 **Clutch pressure plate, Gasoline removing/installing**

— attach flywheel retainer VW 215c
— mark position of pressure plate on flywheel (arrow)
— loosen bolts diagonally

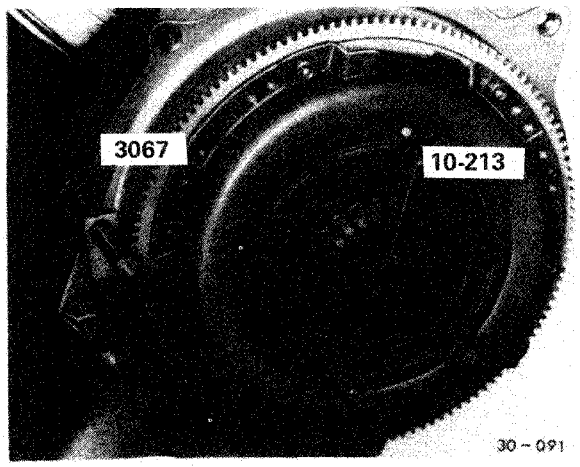


Fig. 2 **Clutch assembly, Diesel removing/installing**

—change retainer over when removing

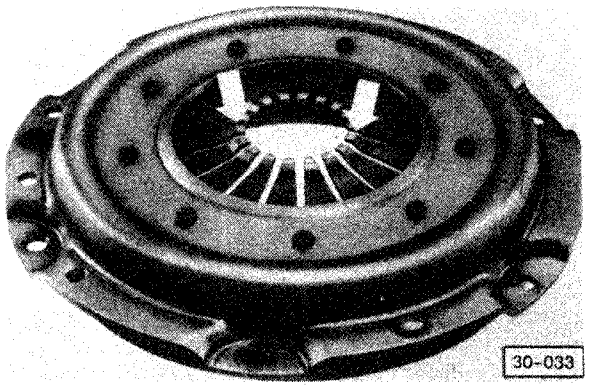


Fig. 3 **Clutch diaphragm spring, checking fingers**

• scores (arrows) up to depth of 0.3 mm (0.012 in.) are OK

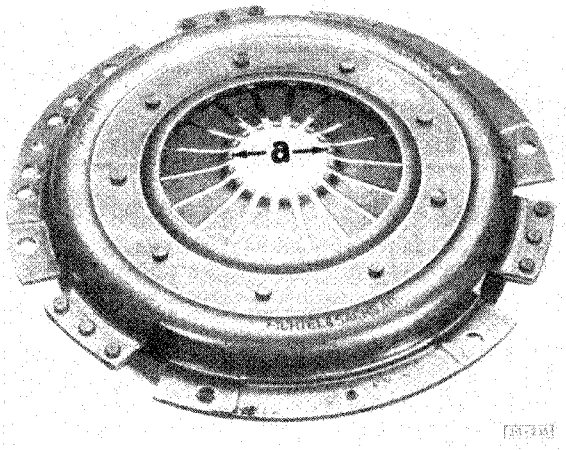


Fig. 4 **Clutch pressure plate, 228 mm (9 in.) dia. (modification only for air-cooled vehicles)**

distance a between fingers:
was = 55mm (2 3/16 in.) dia.
is now = 46mm (1 13/16 in.) dia.

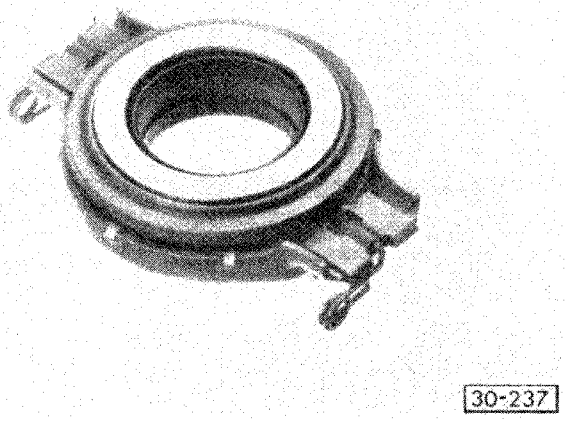


Fig. 5 **Production release bearing, air-cooled engines**

● contact surface diameter is 46 mm (1 13/16 in.)

## 30.6 Clutch disc / Clutch pressure plate / Clutch diaphragm spring

| 4-speed 091-091/1 | 5-speed 094 |
|---|---|

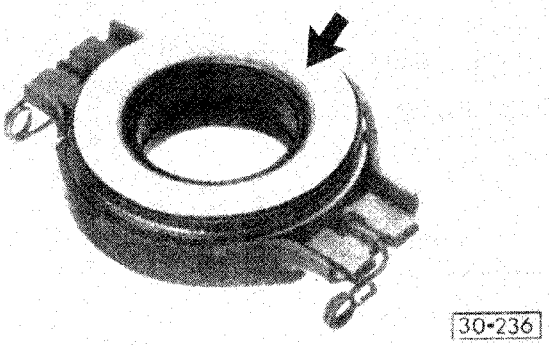


**Fig. 6 Replacement release bearing, air-cooled engines**

**Note**

Release bearing with wider contact surface (arrow) is the only bearing available as spare part. This release bearing will work with either old or new type pressure plates.

**Engine replacement**

If exchanging engines, be sure that wider-contact-surface release bearing is used if pressure plate is of older type [where a, Fig. 4, = 55 mm (2 3/16 in.) dia.]

**CAUTION**

**Do not** install release bearing having narrow contact surface [46 mm (1 13/16 in.) dia.] together with short-fingered pressure plate [a = 55 mm (2 3/16 in.) dia.]

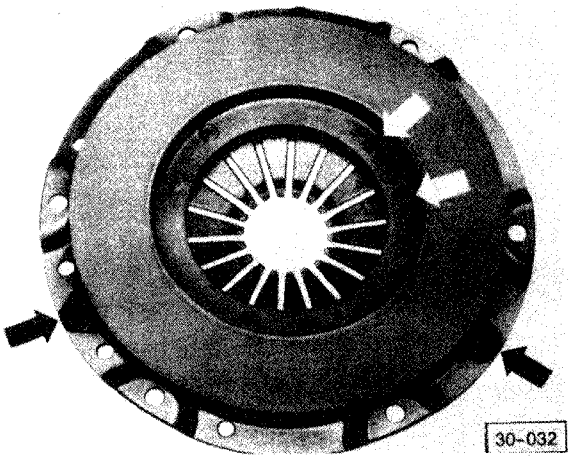


**Fig. 7 Clutch pressure plate, checking**

— check straps (black arrows) between plate and cover for cracks and tightness of rivets (white arrows)
• clutches with loose or damaged rivets must be replaced

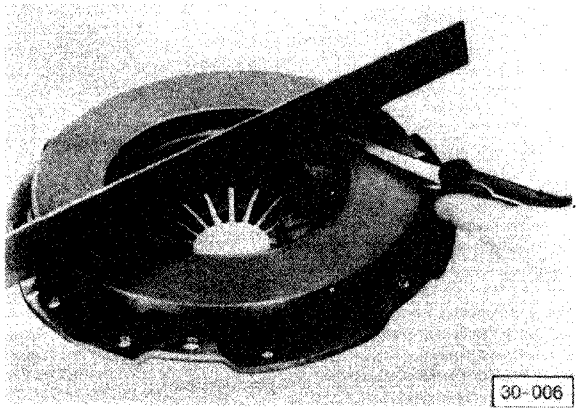


**Fig. 8 Clutch pressure plate, checking**

— check for cracks, burn marks and wear
• inward taper: 0.3 mm (0.012 in.) max.

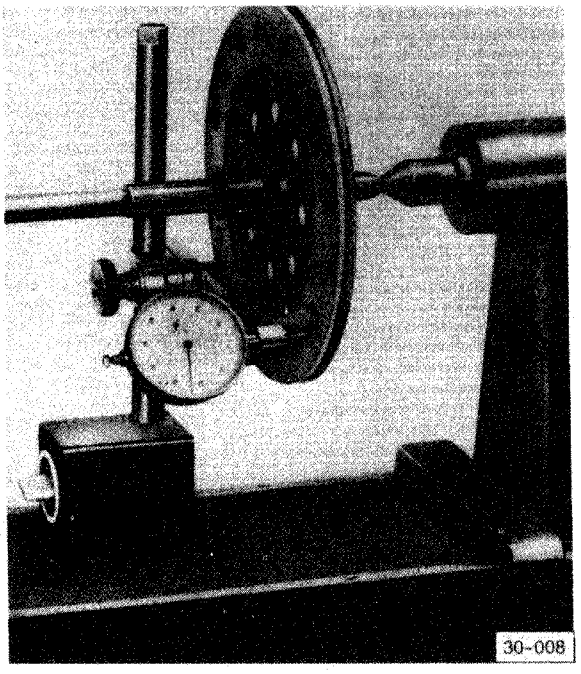


**Fig. 9 Clutch disc, checking**

— check runout: 0.5 mm (0.020 in.) max.
• measured 2.5 mm (3/32 in.) from edge of disc
— check lining and splines for wear and rivets for tightness
— when installing, lubricate splines with $MoS_2$ powder