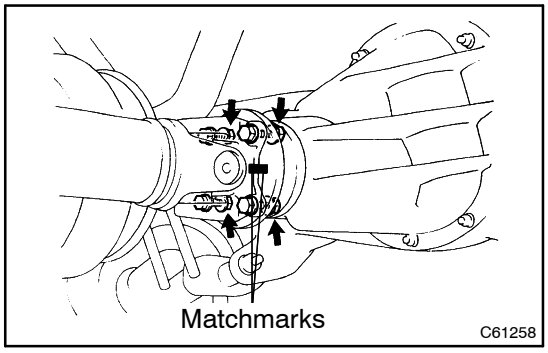
300IG–01

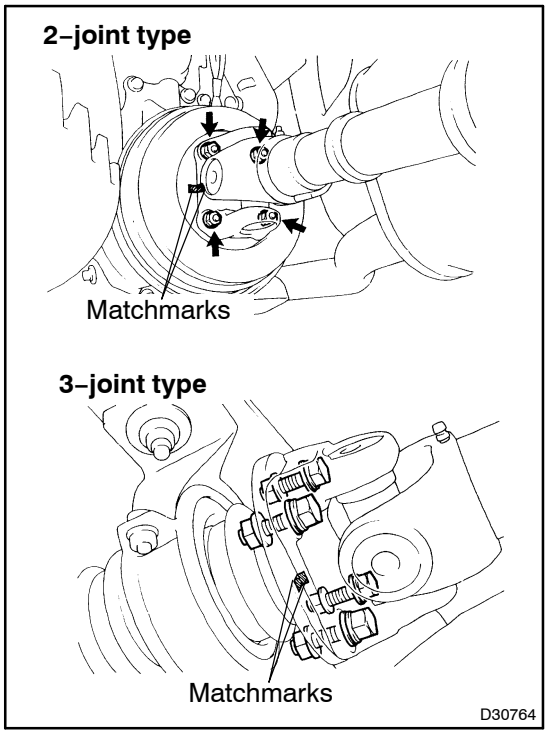
OVERHAUL



1. REMOVE PROPELLER SHAFT ASSY

(a) Place matchmarks on the propeller shaft flange and differential.

(b) Remove the 4 nuts, 4 bolts and 4 washers.

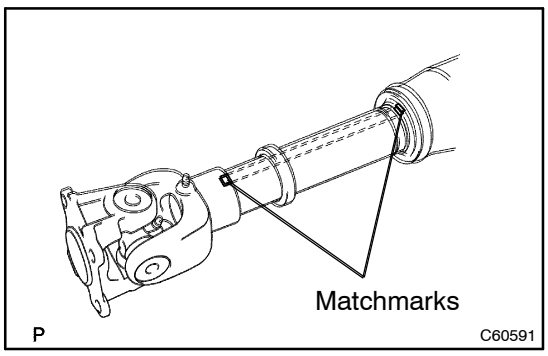


(c) 2–joint type:
Place matchmarks on the propeller shaft flange and parking brake drum.

(d) 3–joint types:
Place matchmarks on the propeller shaft flange and intermediate shaft.

(e) Remove the 4 nuts, 4 washers and 4 bolts.

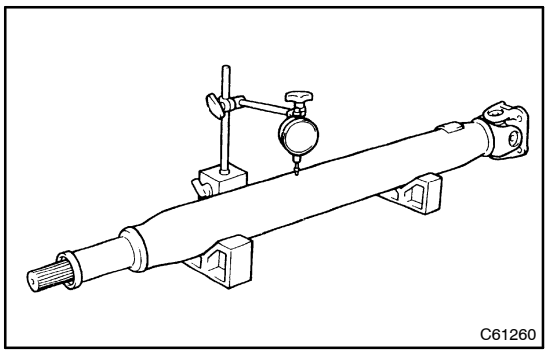
(f) Remove the propeller shaft.



2. REMOVE SLEEVE YOKE

(a) Place matchmarks on universal joint sleeve yoke and propeller shaft.

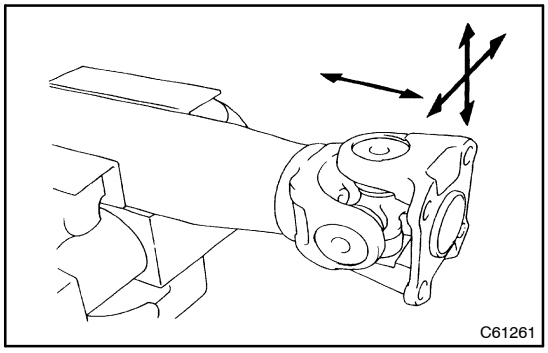
(b) Remove the universal joint sleeve yoke assembly from the propeller shaft.



3. INSPECT PROPELLER SHAFT ASSY

(a) Using a dial indicator, check the shaft runout.
Maximum runout: 0.8 mm (0.031 in.)

If the shaft runout is greater than maximum, replace the shaft.

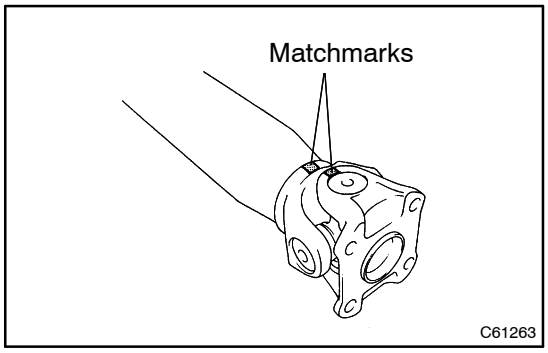


4. INSPECT UNIVERSAL JOINT SPIDER ASSY

(a) Check the spider bearings for wear or damage.

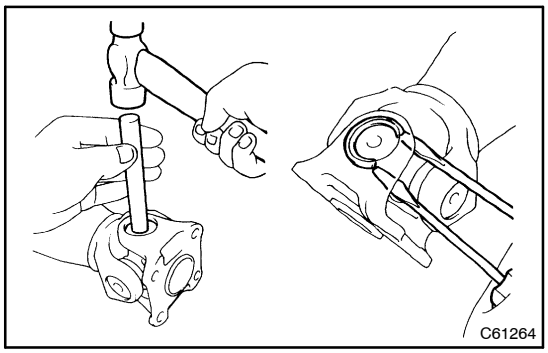
(b) Shake the spider in the axial direction and right angle direction strongly with both hands, and check that there is no looseness in the spider and needle roller bearing.

If necessary, replace the spider bearing.



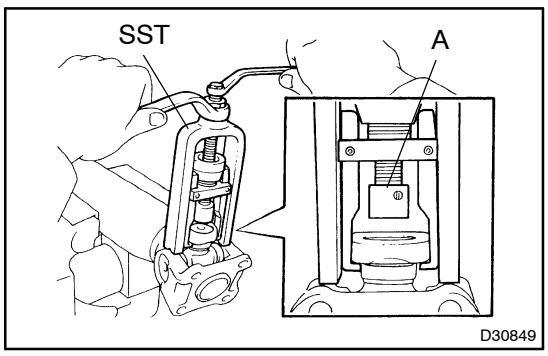
5. REMOVE UNIVERSAL JOINT SPIDER ASSY

(a) Place matchmarks on the propeller shaft and yoke.



(b) Using a brass bar and a hammer and tap the center of the cup lightly.

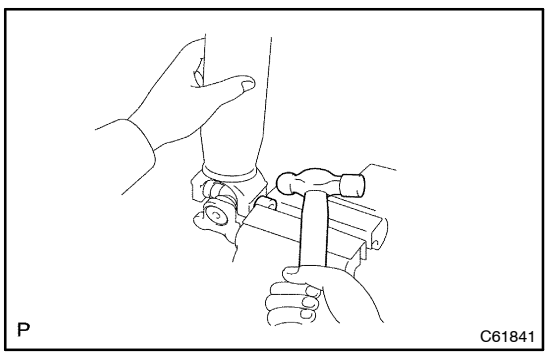
(c) Using 2 screwdrivers and a hammer to remove the 4 spider bearing hole snap rings.



(d) Using SST to push out the spider bearing until just before contact between the universal joint spider and the yoke.
SST 09332–25010

NOTICE:

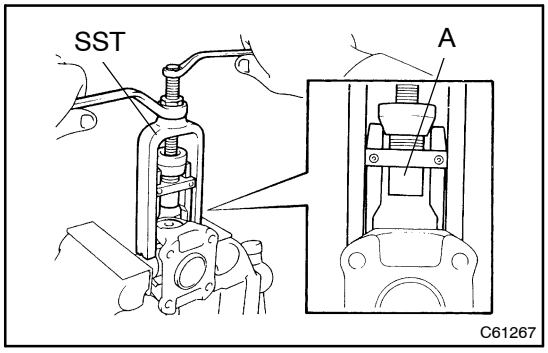
- **Take sufficient care that the part A of the SST will not hit the spider bearing.**
- **Do not use the SST in inclined position.**



(e) Clamp the outer race of the spider bearing in a vice, and remove the spider bearing by hitting the yoke part with a hammer.

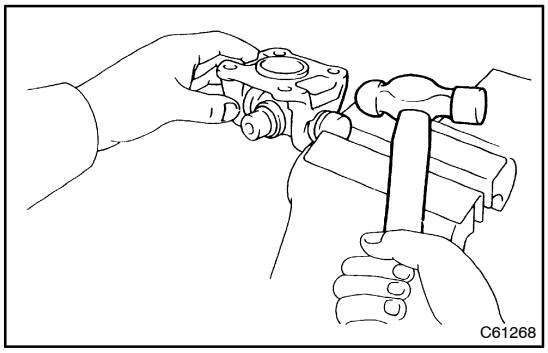
NOTICE:

Never hit the shaft part.

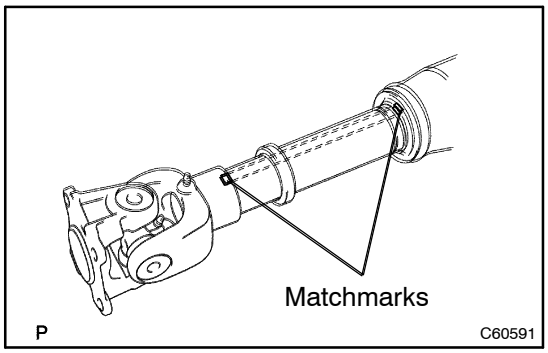


(f) Install the remove bearing outer race on the universal joint spider and fix it in a vice.
(g) Using SST and drive the spider bearing out of the yoke.
SST 09332–25010

NOTICE:
- **Take sufficient care that the part A of the SST will not hit the spider bearing.**
- **Do not use the SST in inclined position.**

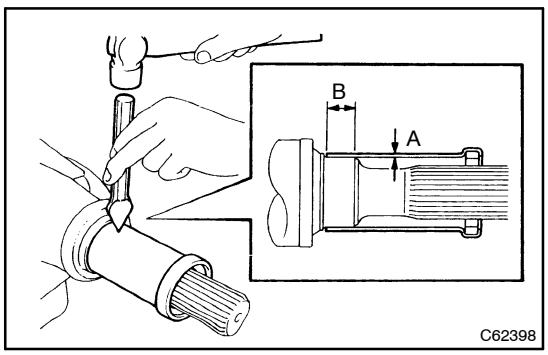


(h) Clamp the outer race of the spider bearing in a vice and hit the yoke part with a hammer to remove the spider bearing.
(i) Remove the universal joint spider.



6. REMOVE REAR PROPELLER SHAFT SLIDING SHAFT DUST COVER SUB–ASSY

(a) Sleeve yoke removal
(1) Apply match marks to the sleeve yoke and propeller shaft.
(2) Pull the sleeve yoke off the propeller shaft.



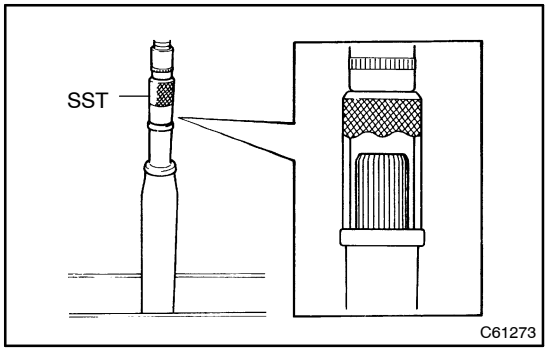
(b) Dust cover removal
(1) Cut the press–fit part of the dust cover with a hacksaw or similar in a spiral, split it with a chisel, and remove it.

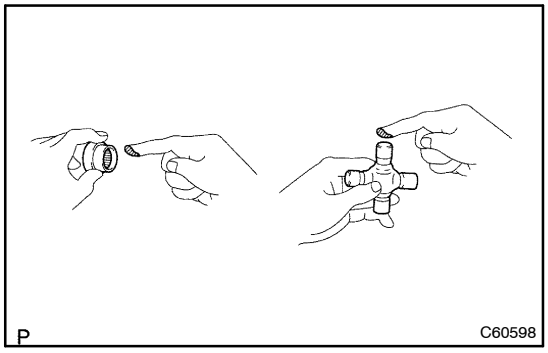
NOTICE:
- **Do not damage the propeller shaft.**
- **Replace the propeller shaft if it has been damaged.**

HINT:
- A (Dust cover thickness) : 1.2 mm
- B (Dust cover press–fit amount) : 20.9 – 21.1 mm

(c) Dust cover installation
(1) Using SST and a press to press–fit a new dust cover.
SST 09636–20010

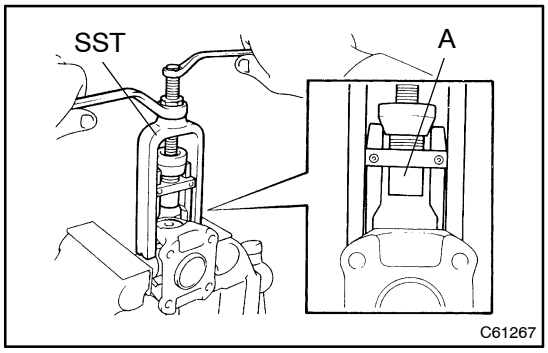
NOTICE:
Perform press–fitting with the universal joint in straight condition.





7. INSTALL UNIVERSAL JOINT SPIDER ASSY

(a) Remove the old grease in the bearing case and needle roller and apply enough MP grease.



8. INSPECT UNIVERSAL JOINT SPIDER ASSY

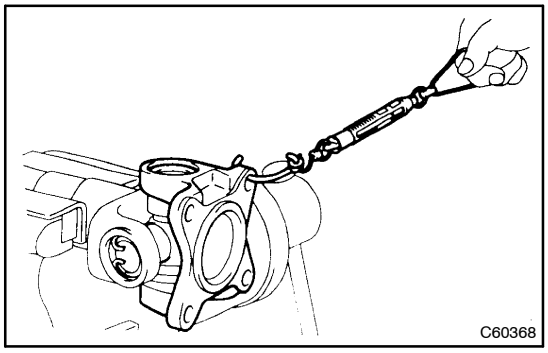
(a) Install the universal joint spider on the yoke, and using SST to press–fit the spider bearing into the yoke until the snap ring groove becomes visible.
SST 09332–25010

(b) Select the snap rings on both sides so that the play of the universal joint spider in axial direction becomes 0 mm.

Select snap rings with the same thickness on both sides.

Sorts and discrimination of the retainer ring

Discrimination	Thickness mm (in.)
1	1.98 – 2.00 (0.0780 – 0.0787)
2	2.00 – 2.02 (0.0787 – 0.0795)
3	2.02 – 2.04 (0.0795 – 0.0803)
4	2.04 – 2.06 (0.0803 – 0.0811)
5	2.06 – 2.08 (0.0811 – 0.0819)
6	2.08 – 2.10 (0.0819 – 0.0827)
7	2.10 – 2.12 (0.0827 – 0.0835)
8	2.12 – 2.14 (0.0835 – 0.0843)
9	2.14 – 2.16 (0.0843 – 0.0850)
10	2.16 – 2.18 (0.0850 – 0.0858)



9. INSTALL SLEEVE YOKE

(a) Using a spring tension gauge, hang the hook of the spring tension gauge on the bolt hole of the flange yoke and measure the rotating force.

Standard rotating torque (at starting):
0.5 – 2.8 N·m (5.1 – 28.6 kgf·cm, 4.4 – 24.8 in.·lbf)

NOTICE:

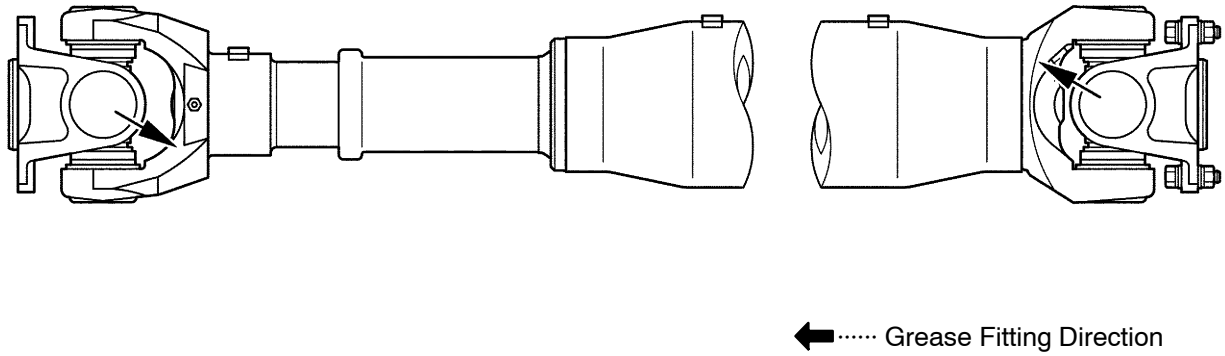
Measurement of rotating force should be done at 2 positions for each universal joint by 90° on the opposite directions (flange yoke side and end yoke side).

When the rotating force is lighter than the standard, use one lank thicker retainer snap ring and one lank thinner snap ring when it is heavier.

10. INSTALL PROPELLER SHAFT ASSY

(a) Remove the old grease on the spline and sliding sections.
(b) Remove any rust and dirt on the spline sections.
(c) Apply bearing grease to the spline and sliding sections.
(d) Align the matchmarks of the sliding yoke and sleeve yoke, and insert the sleeve yoke.

SPIDER GREASE FITTING ASSEMBLY DIRECTION
Propeller Shaft



P C60589