HOW TO USE THIS MANUAL

IN00U–36

GENERAL INFORMATION

1. INDEX

An INDEX is provided on the first page of each section to guide you to the item to be repaired. To assist you in finding your way through the manual, the section title and major heading are given at the top of every page.

2. PRECAUTION

At the beginning of each section, a PRECAUTION is given that pertains to all repair operations contained in that section.

Read these precautions before starting any repair task.

3. TROUBLESHOOTING

TROUBLESHOOTING tables are included for each system to help you diagnose the problem and find the cause. The fundamentals of how to proceed with troubleshooting are described on page IN–17.

Be sure to read this before performing troubleshooting.

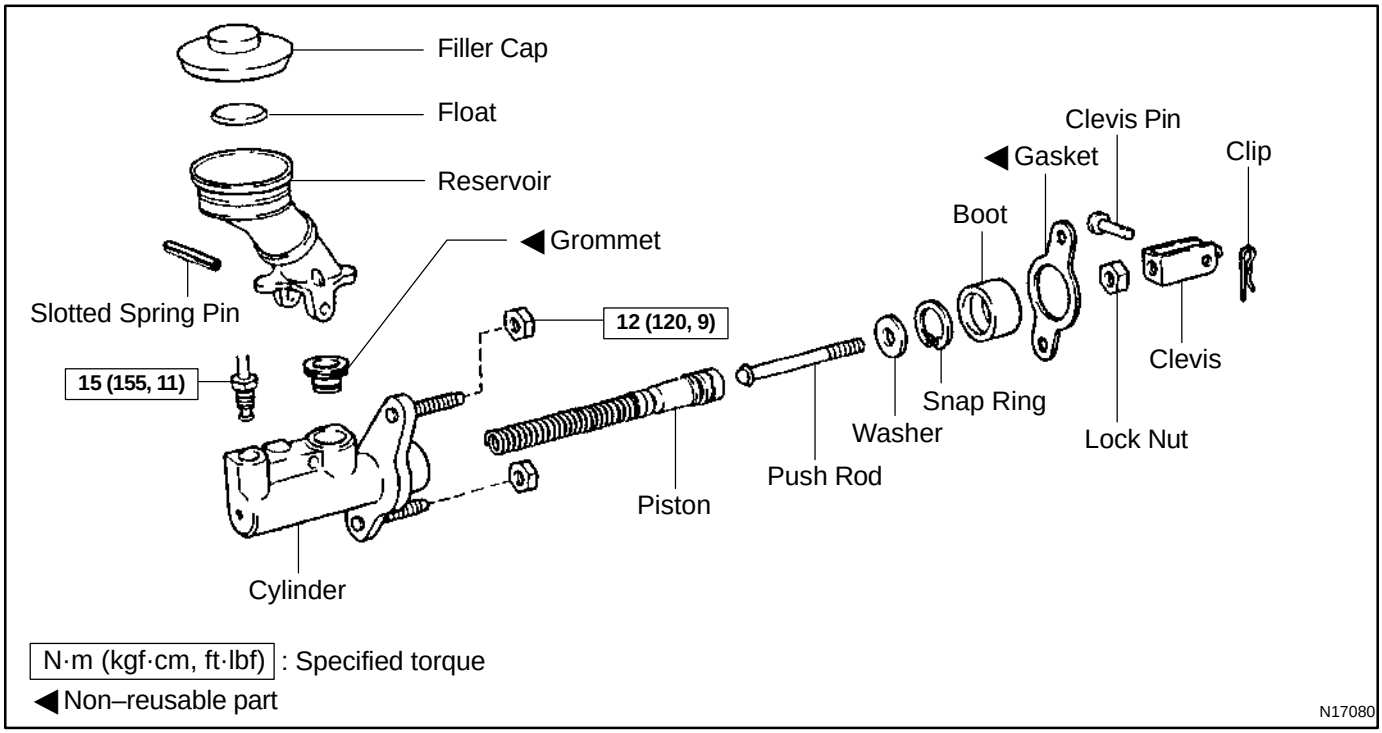
4. PREPARATION

Preparation lists the SST (Special Service Tools), recommended tools, equipment, lubricant and SSM (Special Service Materials) which should be prepared before beginning the operation and explains the purpose of each one.

5. REPAIR PROCEDURES

Most repair operations begin with an overview illustration. It identifies the components and shows how the parts fit together.

Example:



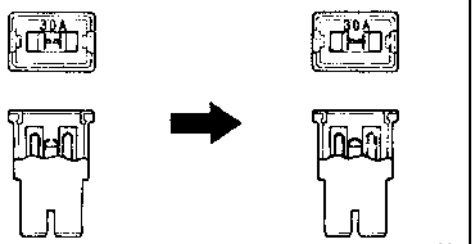
(3) Precoated parts are indicated in the component illustrations by the "▲" symbol.

(g) When necessary, use a sealer on gaskets to prevent leaks.

(h) Carefully observe all specifications for bolt tightening torques. Always use a torque wrench.

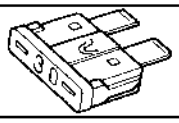
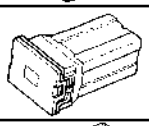
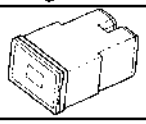
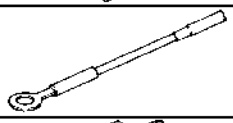
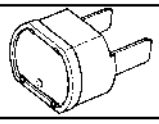
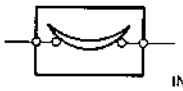
(i) Use of special service tools (SST) and special service materials (SSM) may be required, depending on the nature of the repair. Be sure to use SST and SSM where specified and follow the proper work procedure. A list of SST and SSM can be found in Preparation section in this manual.

Medium Current Fuse and High Current Fuse Equal Amperage Rating



BE1367

(j) When replacing fuses, be sure the new fuse has the correct amperage rating. DO NOT exceed the rating or use one with a lower rating.

Illustration	Symbol	Part Name	Abbreviation
 BE5594	 IN0365	FUSE	FUSE
 BE5595	 IN0366	MEDIUM CURRENT FUSE	M–FUSE
 BE5596	 IN0367	HIGH CURRENT FUSE	H–FUSE
 BE5597	 IN0367	FUSIBLE LINK	FL
 BE5598	 IN0368	CIRCUIT BREAKER	CB

V00076

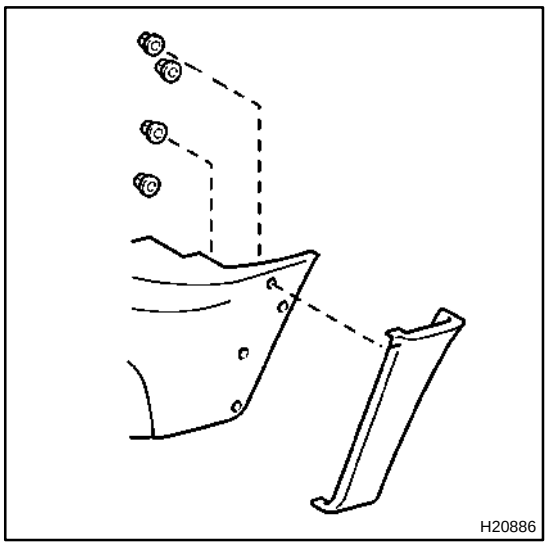
SS0OC–03

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
No.2 oil pan x Drain plug		39	400	29
Oil pump body cover x Oil pump body		10	105	8
Oil pump x Cylinder block	14 mm head	30.5	310	22
	Others	15.5	160	11
Oil strainer x Cylinder block, Oil pump		7.5	80	66 in.·lbf
No.1 oil pan x Oil pump, Oil seal retainer, Cylinder block	10 mm head	7.5	80	66 in.·lbf
	12 mm head	28	290	21
Oil pan baffle plate x No.1 oil pan		7.5	80	66 in.·lbf
No.2 oil pan x No.1 oil pan		7.5	80	66 in.·lbf
Oil filter bracket x Oil pump		18	185	13
Oil dipstick guide x Cylinder head		15	153	11
Oil cooler x Oil filter bracket		68.6	700	51

BO4H3–01

REMOVAL



1. Resin bumper type:

REMOVE FRONT BUMPER EXTENSION

Remove the 4 nuts and front bumper extension.

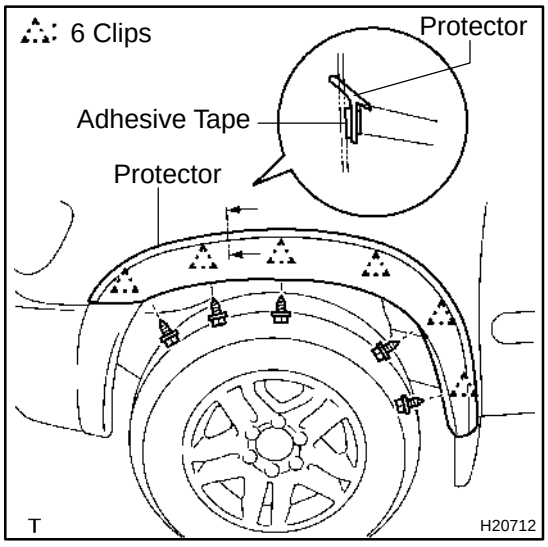
NOTICE:

If the protector are damaged, exchange them for new protector.

2. w/ Front mudguard:

REMOVE FRONT MUDGUARD

Remove the 4 screws and front mudguard.



3. REMOVE FRONT FENDER OUTSIDE MOULDING

(a) Remove the 6 screws.

(b) Using a heat light, heat the moulding to 20 – 30˚C (68 – 86˚F).

NOTICE:

Do not heat the moulding excessively.

(c) Cut off the adhesive tape with a knife.

NOTICE:

Do not damage the body.

(d) Remove the moulding.

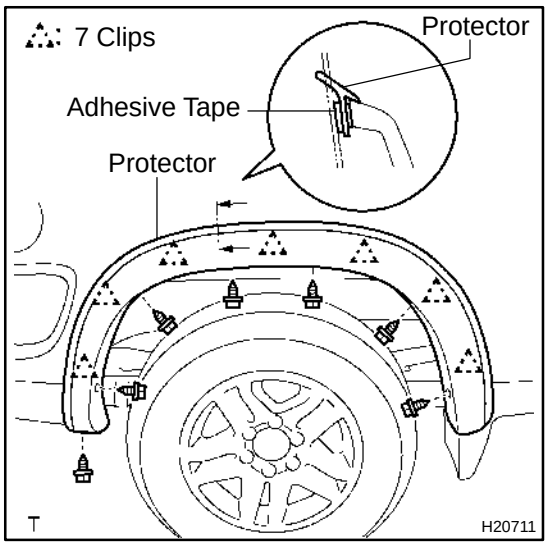
NOTICE:

If the clips are damaged, exchange them for new clips.

4. w/ Rear mudguard:

REMOVE REAR MUDGUARD

Remove the 4 screws and rear mudguard.



5. REMOVE QUARTER OUTSIDE MOULDING

(a) Remove the 6 screws.

(b) Using a heat light, heat the moulding to 20 – 30˚C (68 – 86˚F).

NOTICE:

Do not heat the moulding excessively.

(c) Cut off the adhesive tape with a knife.

NOTICE:

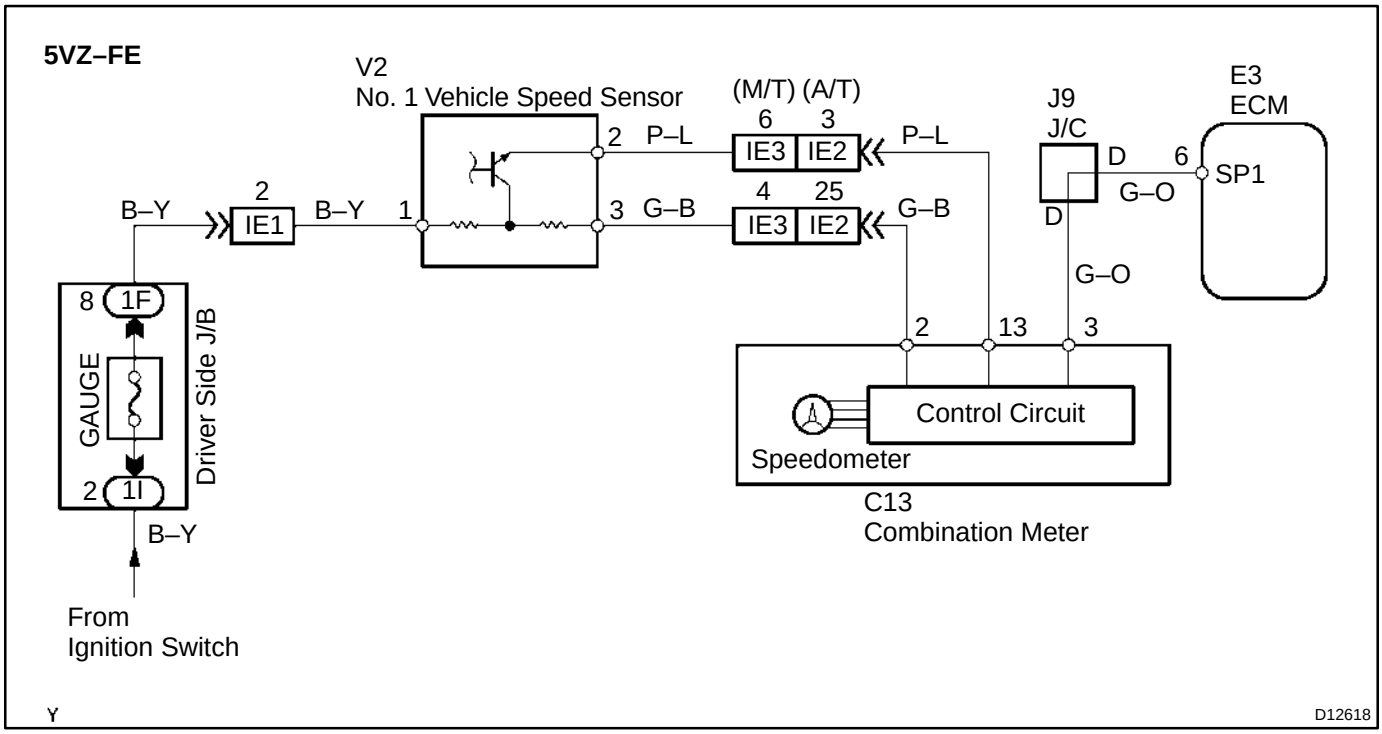
Do not damage the body.

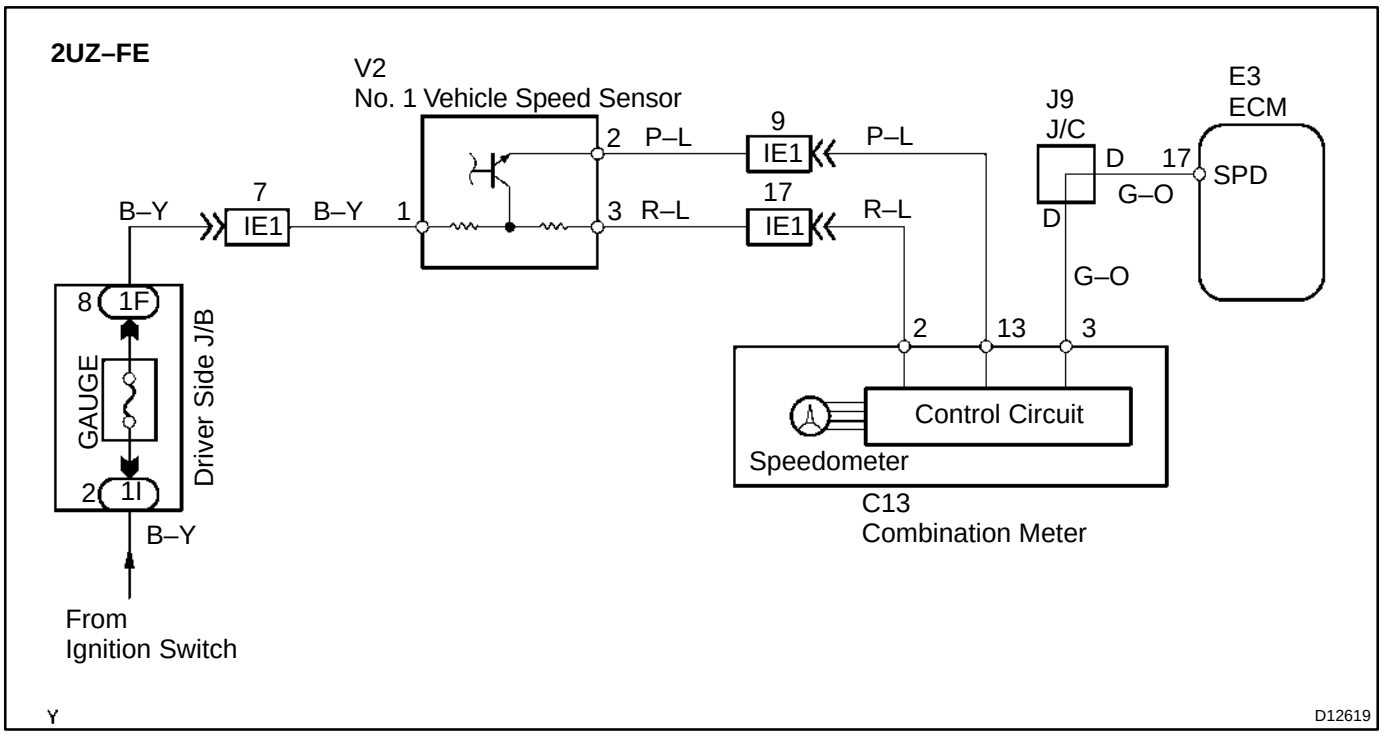
(d) Remove the moulding.

NOTICE:

If the clips are damaged, exchange them for new clips.

WIRING DIAGRAM





DTC	B0133/62	Short in P/T Squib (RH) Circuit (to B+)

CIRCUIT DESCRIPTION

The P/T squib (RH) circuit consists of the airbag sensor assembly and seat belt pretensioner (RH).
It causes the SRS to deploy when the SRS deployment conditions are satisfied.
For details of the function of each component, see OPERATION on page RS–2.
DTC B0133/62 is recorded when a B+ short is detected in the P/T squib (RH) circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B0133/62	▲Short circuit in seat belt pretensioner (RH) wire harness (to B+) ▲P/T squib (RH) malfunction ▲Airbag sensor assembly malfunction	▲Seat belt pretensioner (RH) ▲Airbag sensor assembly ▲Wire harness

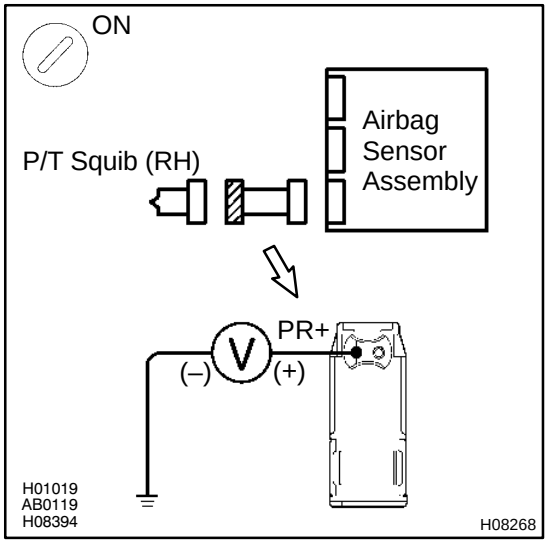
WIRING DIAGRAM

See page DI–539.

INSPECTION PROCEDURE

1	**Prepare for inspection (See step 1 on page DI–580).**

2	**Check P/T squib (RH) circuit.**



CHECK:

(a) Turn ignition switch to ON.

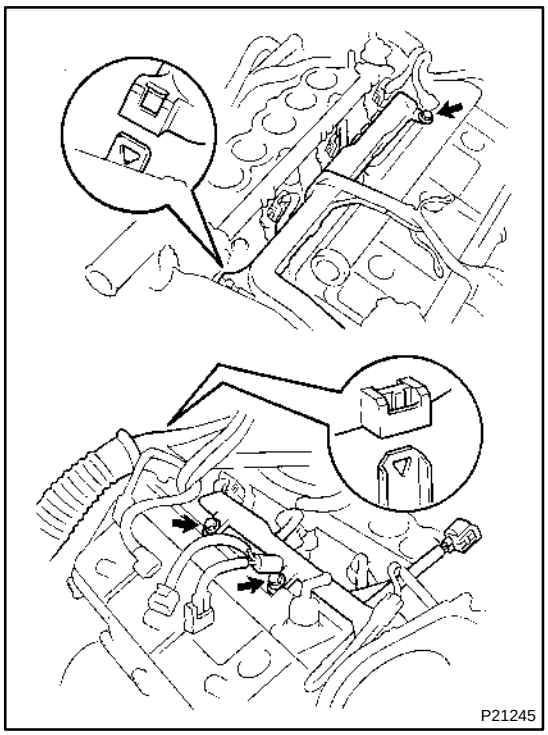
(b) For the connector (on the seat belt pretensioner side) between the seat belt pretensioner (RH) and the airbag sensor assembly, measure the voltage between PR+ and body ground.

OK:

Voltage: 0 V

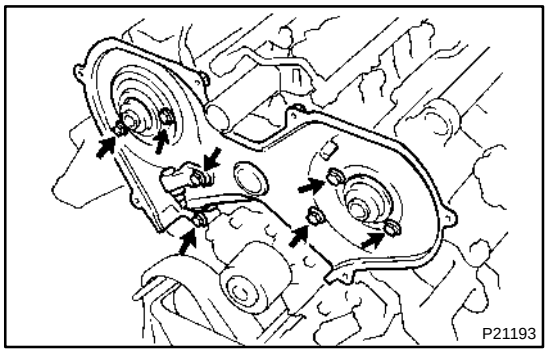
NG → **Repair or replace harness or connector between seat belt pretensioner (RH) and airbag sensor assembly.**

OK



12. DISCONNECT ENGINE WIRE

(a) Disconnect the oil pressure sensor connector.
(b) Disconnect the crankshaft position sensor connector.
(c) Disconnect the 6 Injector connectors.
(d) Disconnect the ECT sender gauge connector.
(e) Disconnect the ECT sensor connector.
(f) Disconnect the knock sensor connector.
(g) Disconnect the camshaft position sensor connector.
(h) Disconnect the 3 engine wire clamps.
(i) Remove the 3 bolts, and disconnect the engine wire from the cylinder head.

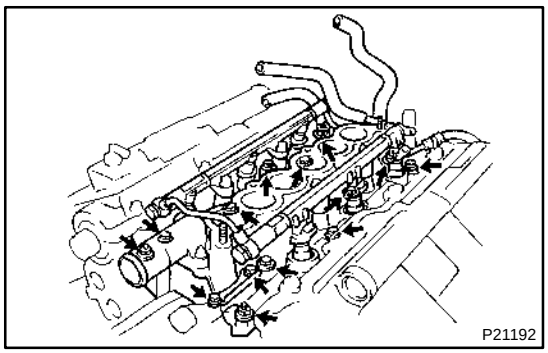


13. REMOVE CAMSHAFT POSITION SENSOR

14. REMOVE NO. 3 TIMING BELT COVER

Remove the 6 bolts and timing belt cover.

15. REMOVE FUEL PRESSURE REGULATOR



16. REMOVE INTAKE MANIFOLD ASSEMBLY

(a) Disconnect the fuel inlet hose.
(b) Remove the 2 bolts and intake manifold stay.
(c) Remove the 8 bolts, 4 nuts, 4 plate washers, the intake manifold, delivery pipes and injectors assembly and 2 gaskets.

17. REMOVE PS PUMP BRACKET

18. REMOVE OIL DIPSTICK AND GUIDE

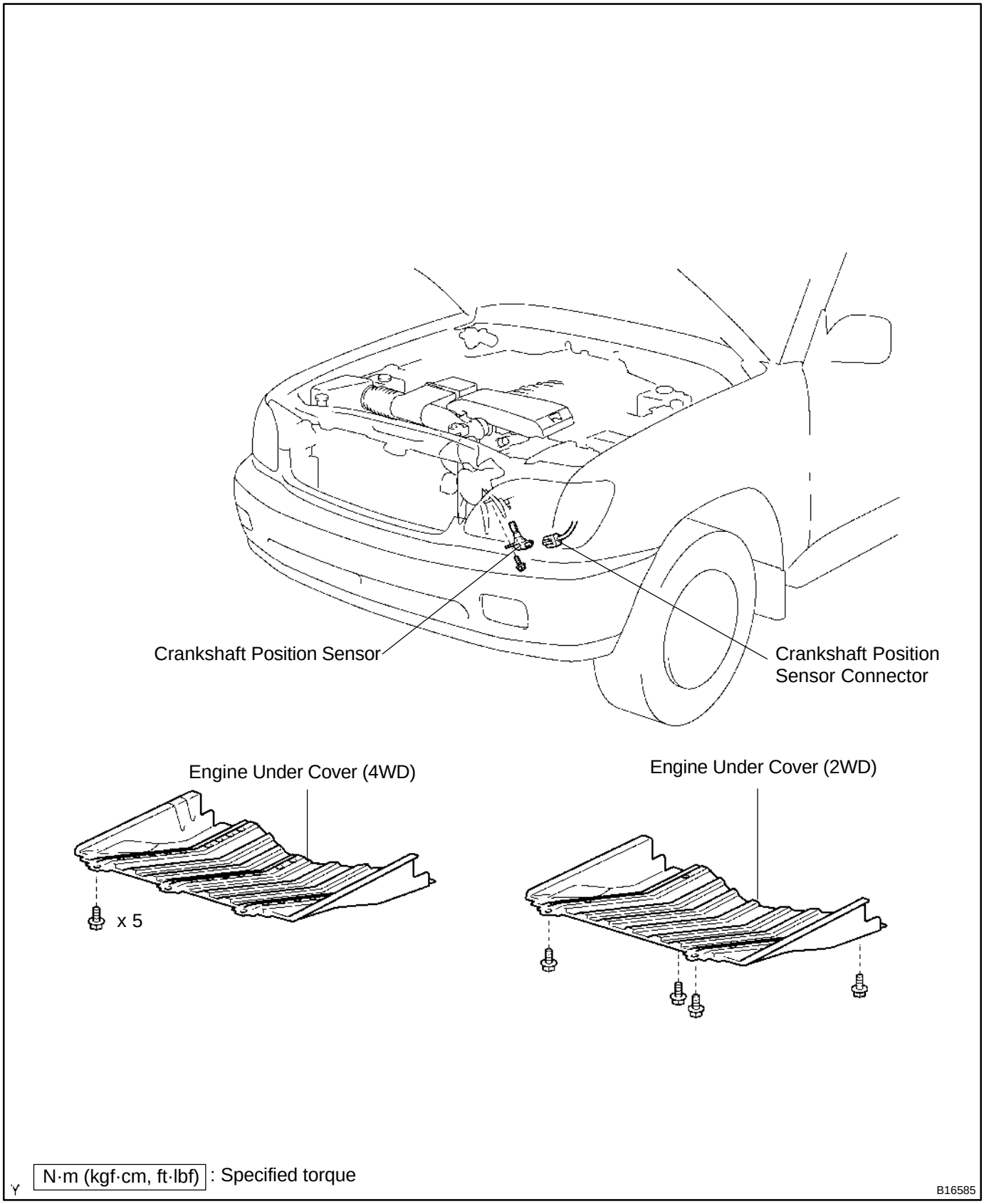
(a) Remove the 2 bolts holding the dipstick guide to the generator bracket.
(b) Pull out the dipstick guide together with the dipstick from the oil pan.
(c) Remove the O–ring from the dipstick guide.

19. REMOVE GENERATOR BRACKET

CRANKSHAFT POSITION SENSOR

IG08W–05

COMPONENTS



SF134–03

INSPECTION

1. INSPECT INJECTOR INJECTION

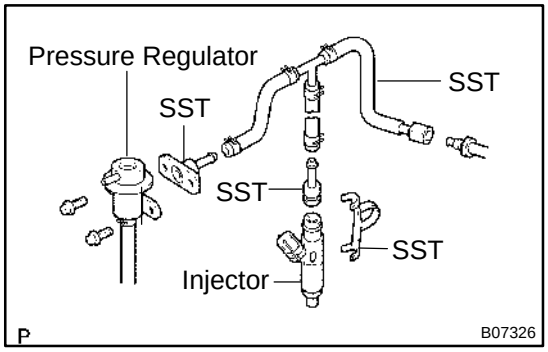
CAUTION:

Keep injector clean of sparks during the test.

(a) Disconnect the fuel inlet hose (fuel tube connector) from the fuel filter.

(b) Connect SST (attachment and hose) to the fuel tube.
SST 09268–41047 (09268–52011)

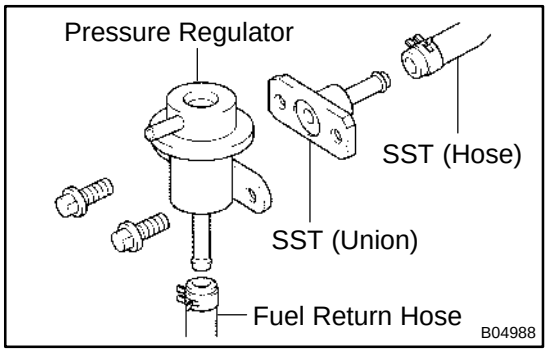
(c) Remove the pressure regulator from the delivery pipe.



(d) Install the O–ring to the fuel inlet of the pressure regulator.

(e) Connect SST (hose) to the fuel inlet of the pressure regulator with SST (union) and the 2 bolts.
SST 09268–41047 (09268–41091)
Torque: 7.5 N·m (80 kgf·cm, 66 in.·lbf)

(f) Connect the fuel return hose to the fuel outlet of the pressure regulator.



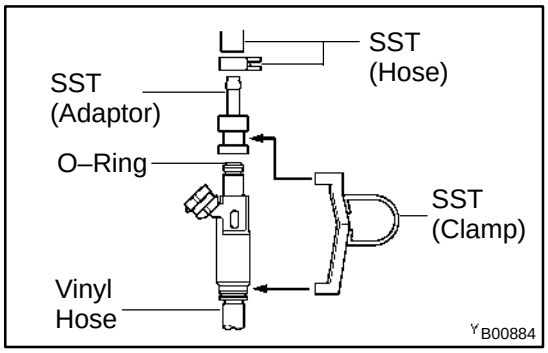
(g) Install the O–ring to the injector.

(h) Connect SST (adaptor and hose) to the injector, and hold the injector and union with SST (clamp).
SST 09268–41047 (09268–41110, 09268–41300)

(i) Put the injector into the graduated cylinder.

CAUTION:

Install a suitable vinyl hose onto the injector to prevent gasoline from splashing out.



(j) Connect a hand–held tester to the DLC3.

(k) Connect the battery negative (–) cable to the battery.

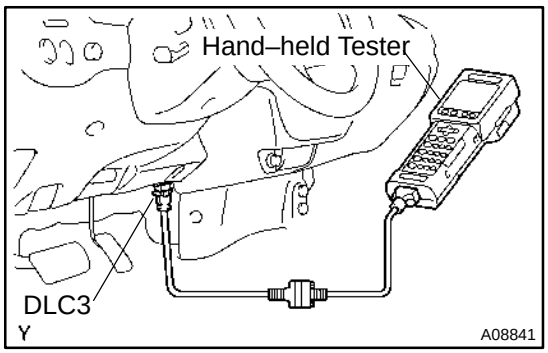
(l) Turn the ignition switch ON, and push the hand–held tester main switch ON.

NOTICE:

Do not start the engine.

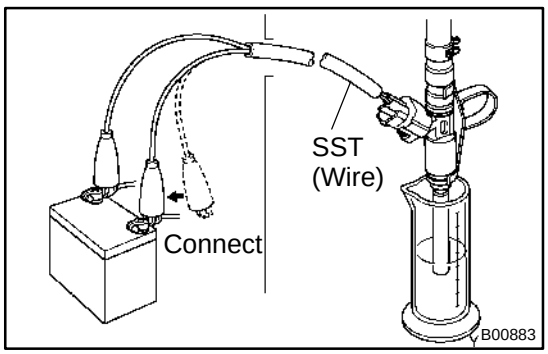
(m) Select the ACTIVE TEST mode on the hand–held tester.

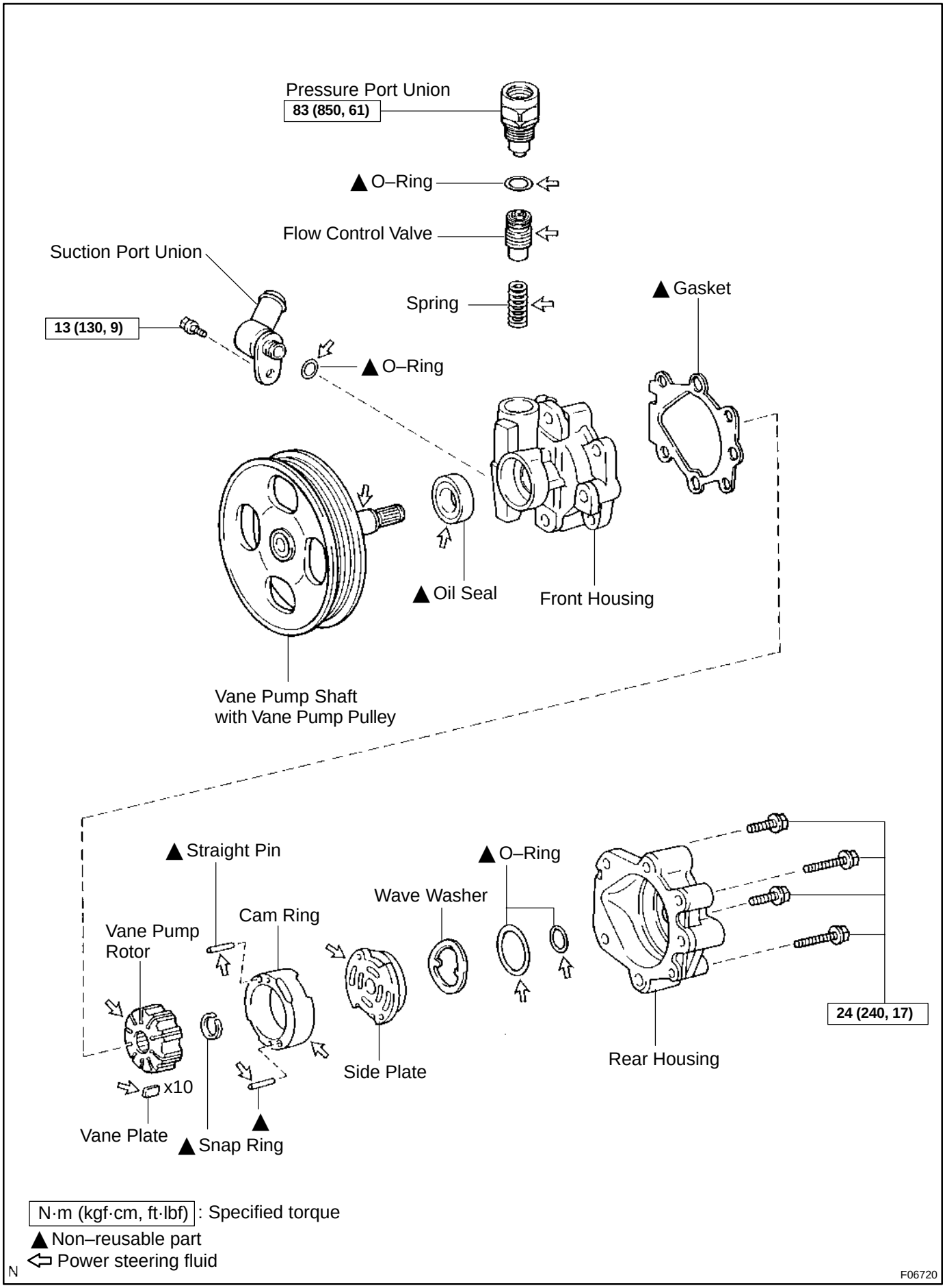
(n) Please refer to the hand–held tester operator's manual for further details.



(o) Connect SST (wire) to the injector and battery for 15 seconds, and measure the injection volume with a graduated cylinder. Test each injector 2 or 3 times.
SST 09842–30070
Volume: 56 – 69 cm^3 (3.4 – 4.2 cu in.) per 15 sec.
Difference between each injector:
13 cm^3 (0.8 cu in.) or less

If the injection volume is not as specified, replace the injector.




Pressure Port Union
83 (850, 61)
▲ O–Ring
Flow Control Valve
Suction Port Union
Spring
▲ Gasket
13 (130, 9)
▲ O–Ring
▲ Oil Seal
Front Housing
Vane Pump Shaft
with Vane Pump Pulley
▲ Straight Pin
▲ O–Ring
Wave Washer
Cam Ring
Vane Pump
Rotor
24 (240, 17)
Side Plate
Rear Housing
x10
Vane Plate
▲ Snap Ring
N·m (kgf·cm, ft·lbf) : Specified torque
▲ Non–reusable part
⇦ Power steering fluid
N
F06720

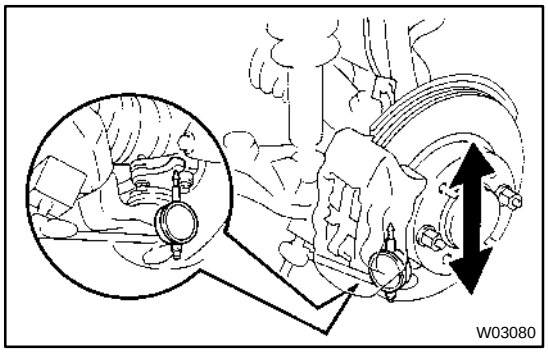
FRONT LOWER BALL JOINT

SA0AW–03

ON–VEHICLE INSPECTION

INSPECT LOWER BALL JOINT EXCESSIVE PLAY ON–VEHICLE

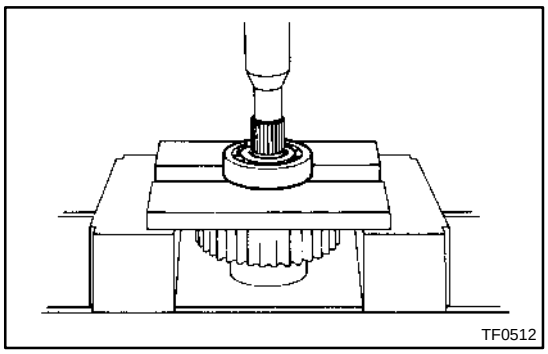
(a) Remove the front wheel and install the hub nuts to the disc.



(b) Using a dial indicator, check the lower ball joint for excessive play when you push the hub nuts up and down with a force of 294 N (30 kgf, 66 lbf).
Maximum: 0.5 mm (0.020 in.)

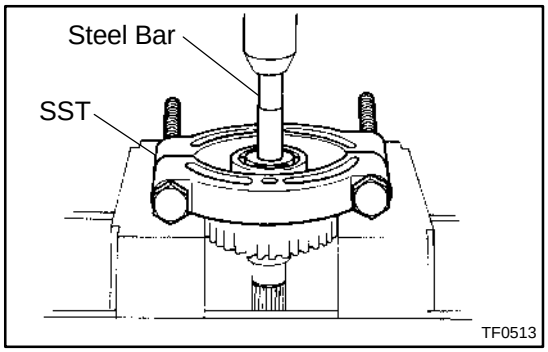
TR00G–06

REPLACEMENT



1. REMOVE FRONT BEARING

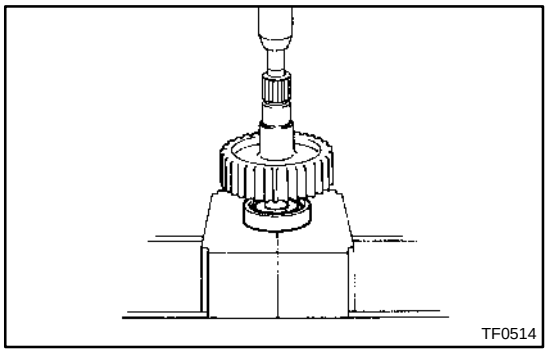
Using a press, remove the front bearing.



2. REMOVE REAR BEARING

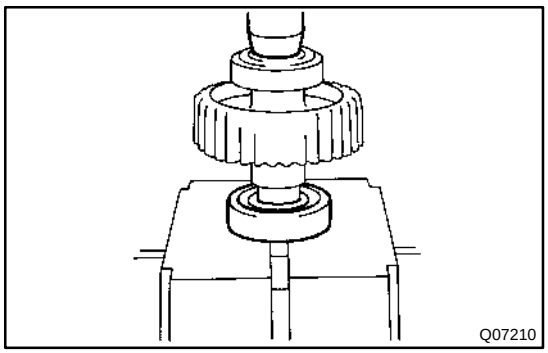
Using SST, a press and steel bar, remove the rear bearing.

SST 09555–55010



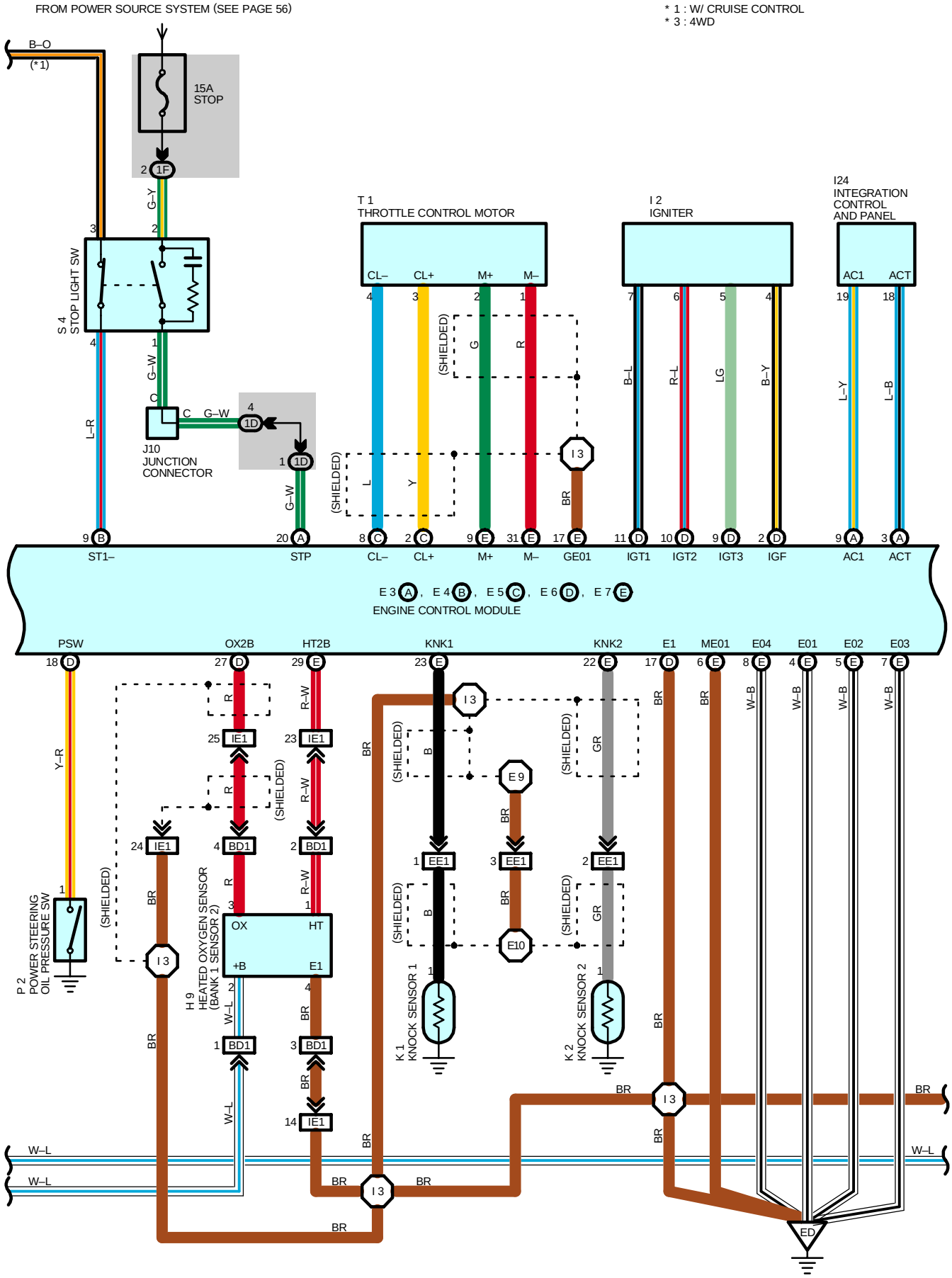
3. INSTALL REAR BEARING

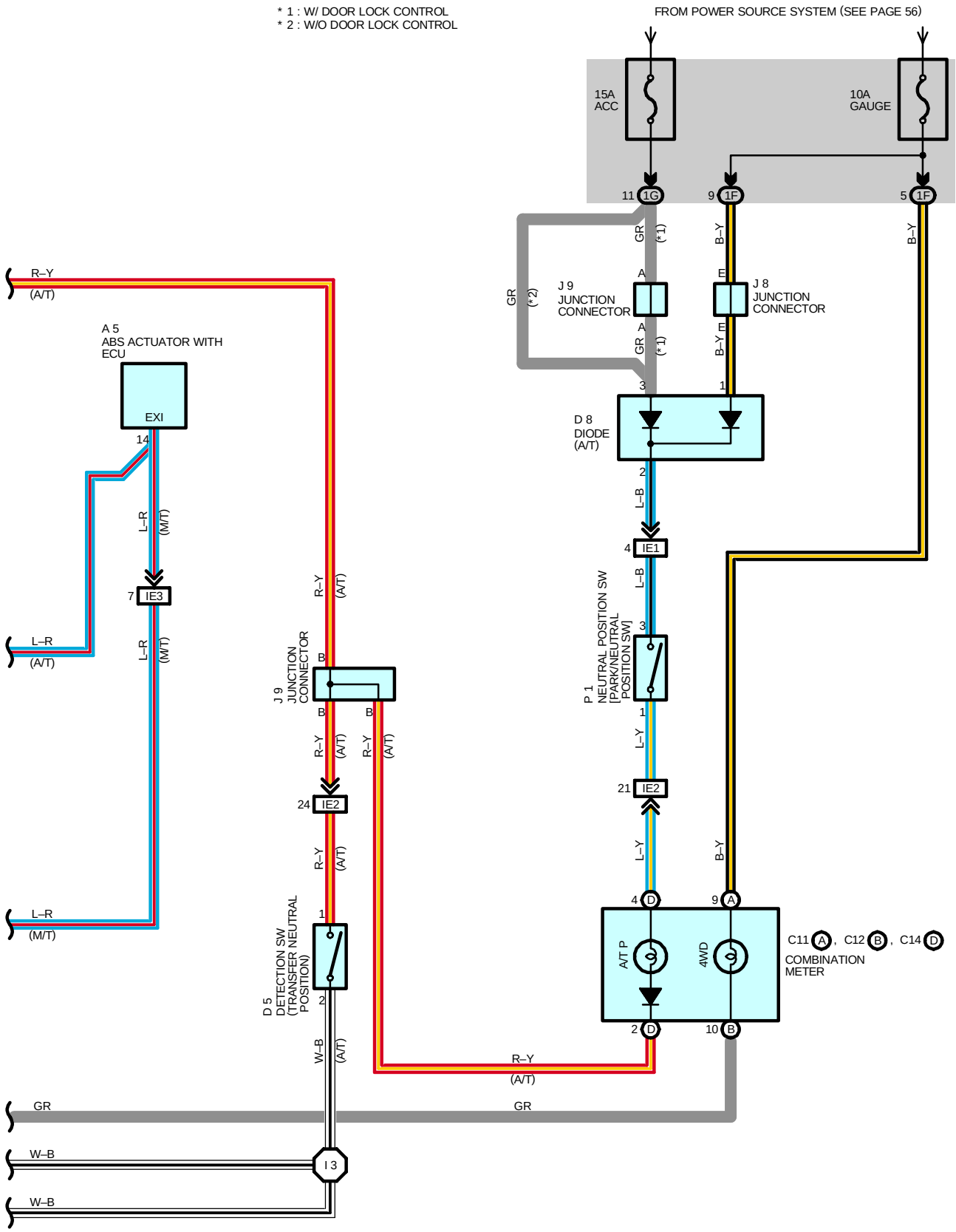
Using a press, install a new rear bearing.



4. INSTALL FRONT BEARING

Using a press, install a new front bearing.


FROM POWER SOURCE SYSTEM (SEE PAGE 56)
* 1 : W/ CRUISE CONTROL
* 3 : 4WD
B–O
(*1)
15A
STOP
2 1F
G–Y
3
2
S 4
STOP LIGHT SW
4
1
G–W
C
L–R
C G–W
4 1D
J10
JUNCTION
CONNECTOR
1 1D
G–W
T 1
THROTTLE CONTROL MOTOR
CL– CL+ M+ M–
4 3 2 1
(SHIELDED)
G
R
L
Y
I 3
BR
I 2
IGNITER
7 6 5 4
B–L
R–L
LG
B–Y
I24
INTEGRATION
CONTROL
AND PANEL
AC1 ACT
19 18
L–Y
L–B
9 B
ST1–
20 A
STP
8 C
CL–
2 C
CL+
9 E
M+
31 E
M–
17 E
GE01
11 D
IGT1
10 D
IGT2
9 D
IGT3
2 D
IGF
9 A
AC1
3 A
ACT
E 3 A , E 4 B , E 5 C , E 6 D , E 7 E
ENGINE CONTROL MODULE
PSW
OX2B
HT2B
KNK1
KNK2
E1
ME01
E04
E01
E02
E03
18 D
27 D
29 E
23 E
22 E
17 D
6 E
8 E
4 E
5 E
7 E
Y–R
R
R–W
25 IE1
23 IE1
(SHIELDED)
24 IE1
4 BD1
2 BD1
BR
P 2
POWER STEERING
OIL PRESSURE SW
1
H 9
HEATED OXYGEN SENSOR
(BANK 1 SENSOR 2)
OX HT
+B E1
3
2
1
4
W–L
BD1
14 IE1
B
E 9
E10
EE1
K 1
KNOCK SENSOR 1
K 2
KNOCK SENSOR 2
GR
W–B
ED


* 1 : W/ DOOR LOCK CONTROL
* 2 : W/O DOOR LOCK CONTROL
FROM POWER SOURCE SYSTEM (SEE PAGE 56)
15A ACC
10A GAUGE
11 1G
9 1F
5 1F
GR (*1)
B–Y
GR (*2)
J 9 JUNCTION CONNECTOR
J 8 JUNCTION CONNECTOR
A 5 ABS ACTUATOR WITH ECU
EXI
14
L–R (M/T)
7 IE3
R–Y (A/T)
L–R (A/T)
L–R (M/T)
D 8 DIODE (A/T)
L–B
4 IE1
P 1 NEUTRAL POSITION SW [PARK/NEUTRAL POSITION SW]
L–Y
21 IE2
24 IE2
J 9 JUNCTION CONNECTOR
D 5 DETECTION SW (TRANSFER NEUTRAL POSITION)
W–B (A/T)
A/T P
4WD
C11 A , C12 B , C14 D
COMBINATION METER
GR
W–B
I 3
W–B

[A] : System Title

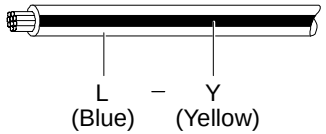
[B] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

B	= Black	W	= White	BR	= Brown
L	= Blue	V	= Violet	SB	= Sky Blue
R	= Red	O	= Orange	LG	= Light Green
P	= Pink	Y	= Yellow	GR	= Gray
G	= Green				

The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

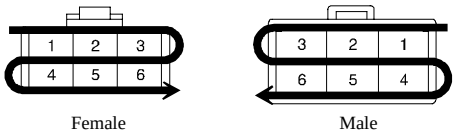
Example: L – Y



[C] : The position of the parts is the same as shown in the wiring diagram and wire routing.

[D] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example : Numbered in order from upper left to lower right / Numbered in order from upper right to lower left



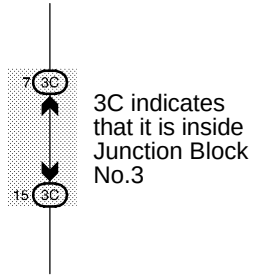
The numbering system for the overall wiring diagram is the same as above

[E] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

Example : (1) Indicates Relay Block No.1

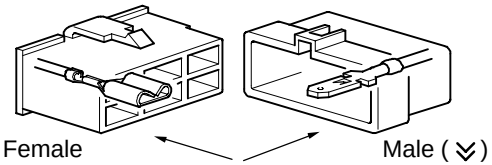
[F] : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

Example:



[G] : Indicates related system.

[H] : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (»). Outside numerals are pin numbers.



[I] : ( ) is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.

[J] : Indicates a shielded cable.

[K] : Indicates and located on ground point.

[L] : The same code occuring on the next page indicates that the wire harness is continuous.