

KPS-18T
Service Manual
~Disassembly~

2006.3.31

Charge pump

NOTE:

Use cloths or paper towels to catch and clean up any spilled oil immediately.

Remove parts in a clean place. When removing, take care not to enter contamination in cases.

When removing O-rings, packing and oil seals, always replace them. Old O-rings, packing and oil seals may be worn or damaged and will result in leaks.

Do not remove non-supplied parts.

1.KPS-18T Assembly(1) [Fig.1]

2.Remove filter(119) from pump body(100). [Fig.2]

3.Remove solenoid cmp(135) from pump body(100).
And remove sleeve(132), spool(133) and spring(134)
from pump body(100). [Fig.3, Fig.4]

*Do not drop pin(140) and spool(133).

Fig.1

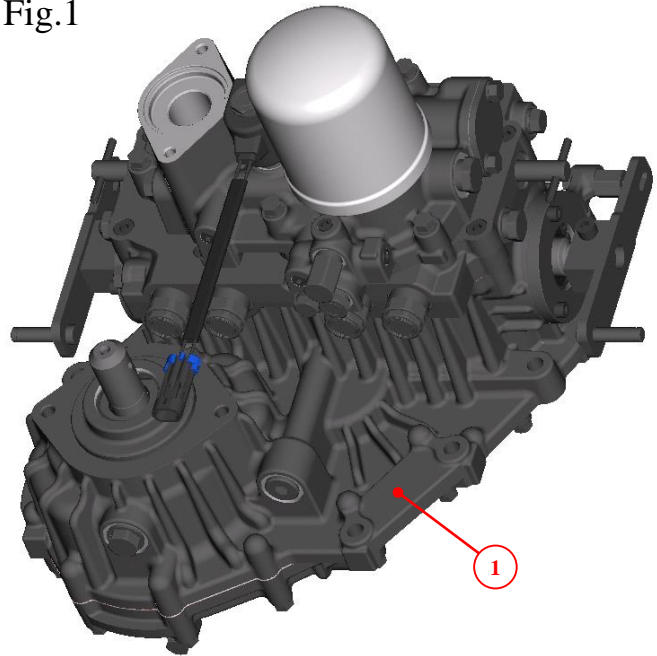


Fig.2

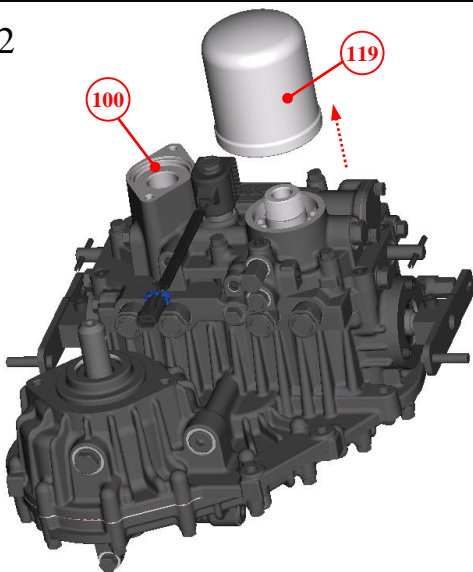


Fig.3

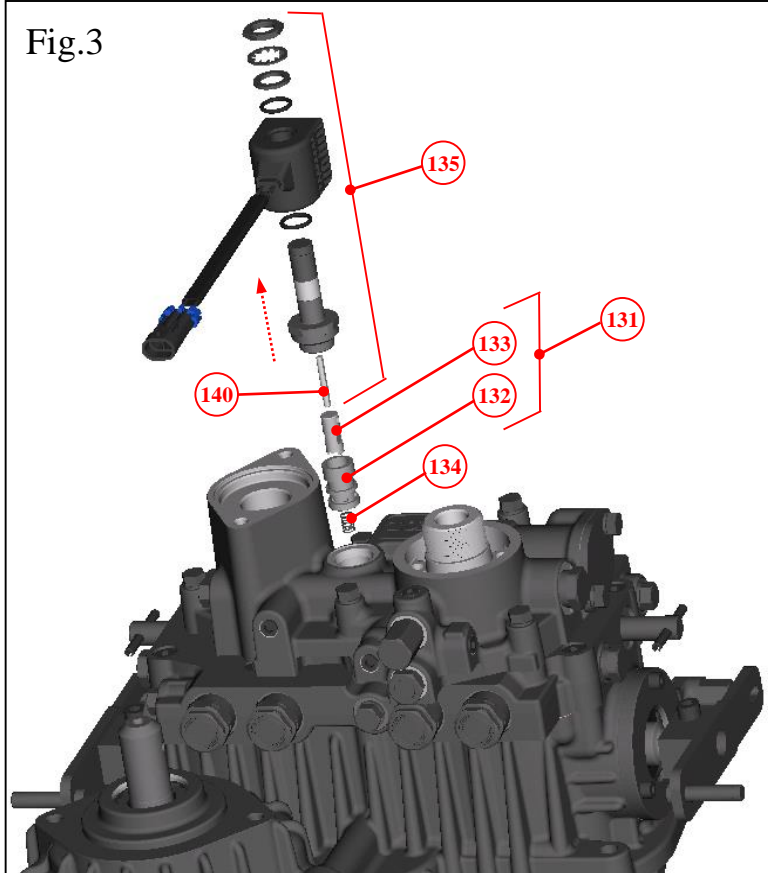


Fig.4



Charge pump

4.Remove plug(118), spring(117), O-ring(39) and valve(116) from pump body(100).

[Fig.5] (Filter bypass valve)

5.Remove plug(109), spring(110), O-ring(14) and valve(108) from pump body(100).

[Fig.6] (Pressure valve)

6.Remove plug(113), spring(114), O-ring(14) and valve(112) from pump body(100).

[Fig.6] (Charge relief valve)

7.Remove two bolts(125), cover(123), gasket (124), spring(122), collar(121) and piston (120) from pump body(100).

[Fig.7] (Accumulator)

*Do not drop valves(116)(108)(112), piston(120) and collar(121).

*Remove bolts(125) while holding plate(123) with your hand, and remove plate(123) slowly.

Fig.5

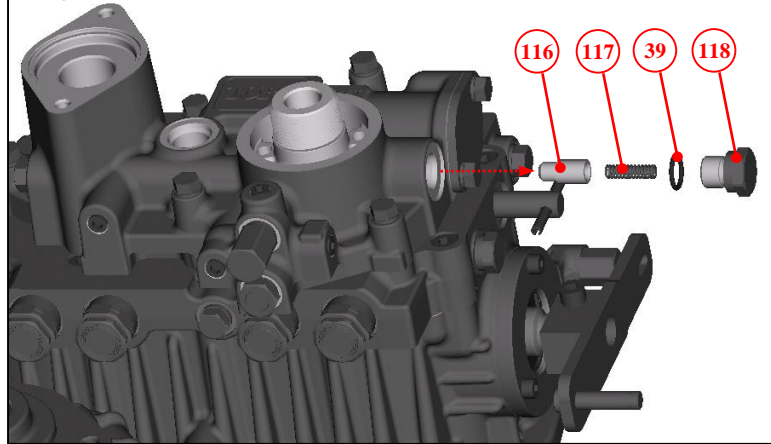


Fig.6

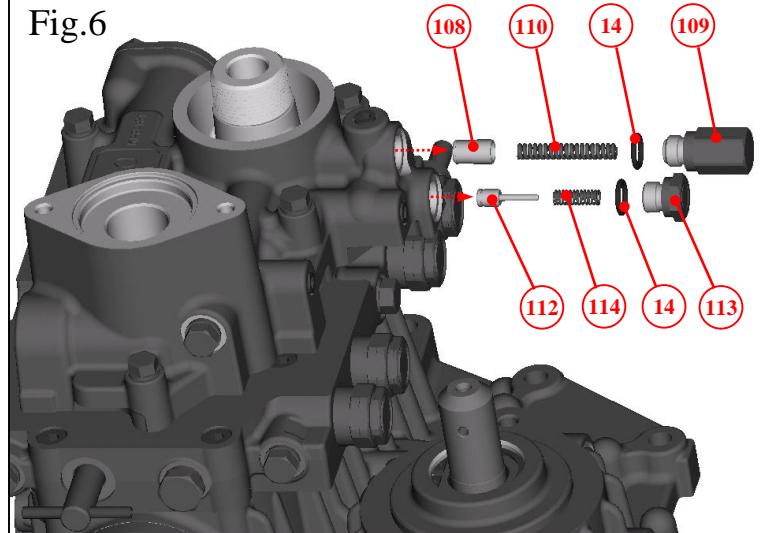
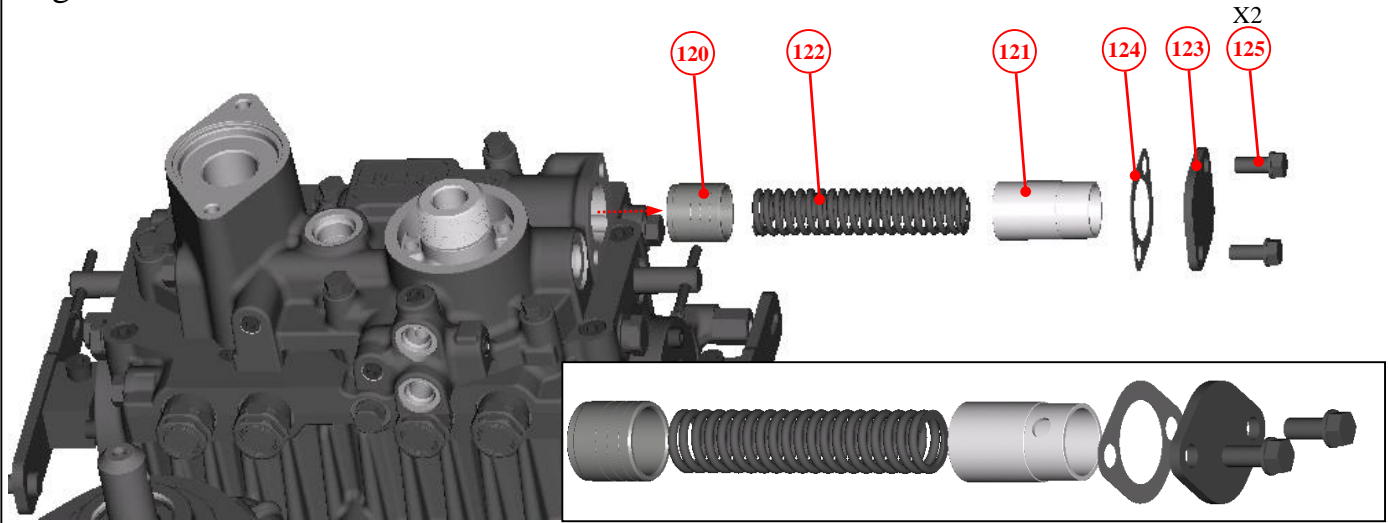


Fig.7



Charge pump

8.Remove three bolts(45) and two bolts(129). [Fig.8]

9.Remove pump body assembly. [Fig.9]

10.Remove O-ring(128), five O-rings(39), two pins (126), two plugs(23), two O-rings(24) and four plugs (105). [Fig.10]

11.Remove inner rotor(103) and outer rotor(104). [Fig.11]

*Inspect rotors. Rotors should be free of all nicks and scratches.

*Do not drop charge pump rotors(103)(104) and avoid damage of surfaces.

*Avoid damage of machined surfaces(center case(3) and pump body(100)).

Fig.8

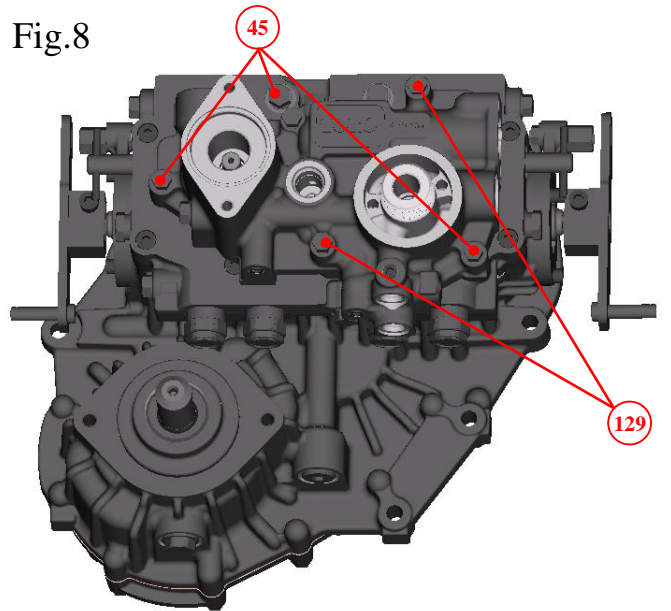


Fig.9

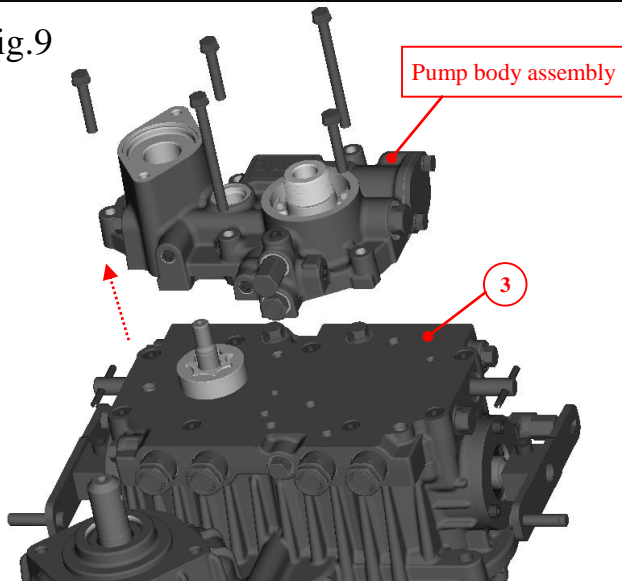


Fig.10

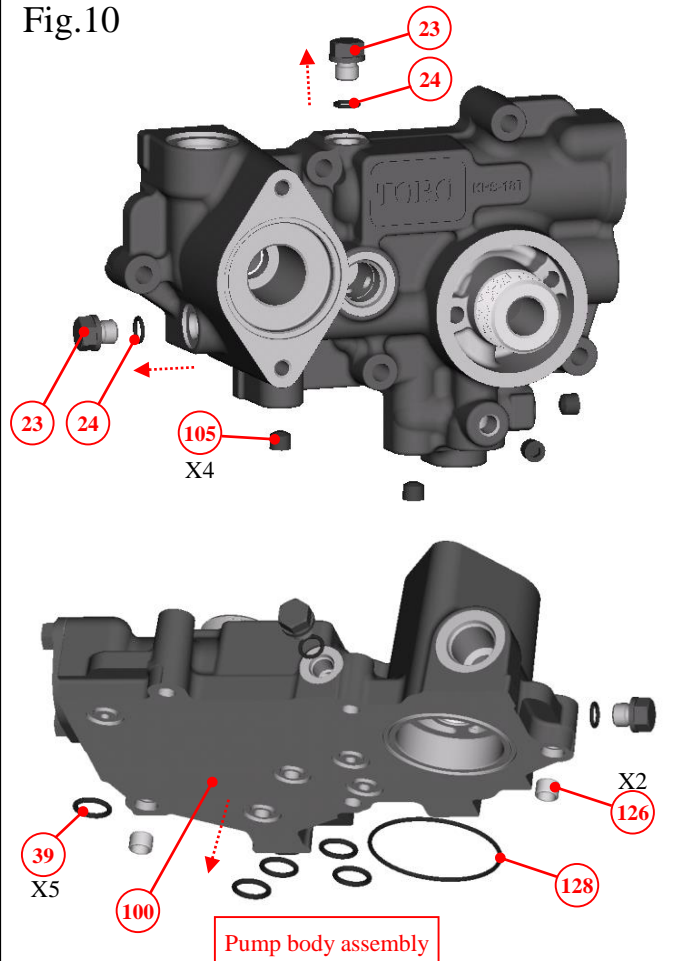
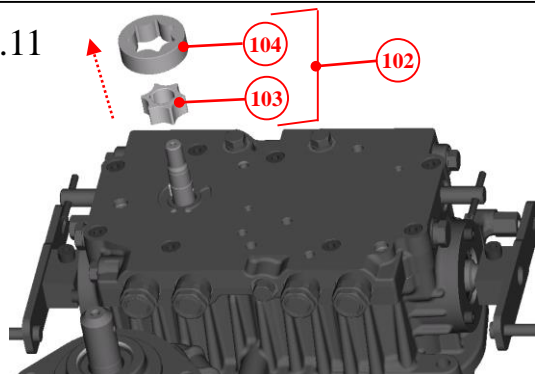


Fig.11



Center case

12.Remove key(127) and eight bolts(25). [Fig.12]

13.Remove center case assembly, packing(31) and two pins(40) slowly . [Fig.13]

*Remove valve plates(9) from cylinder block cmp (51), when removing center case cmp(2).

*Peel off packing that was attached to machined surfaces(center case(3) and housing(27)).

*Avoid damage of machined surfaces(center case(3) and housing(27)), when peeling off packing.

Fig.12

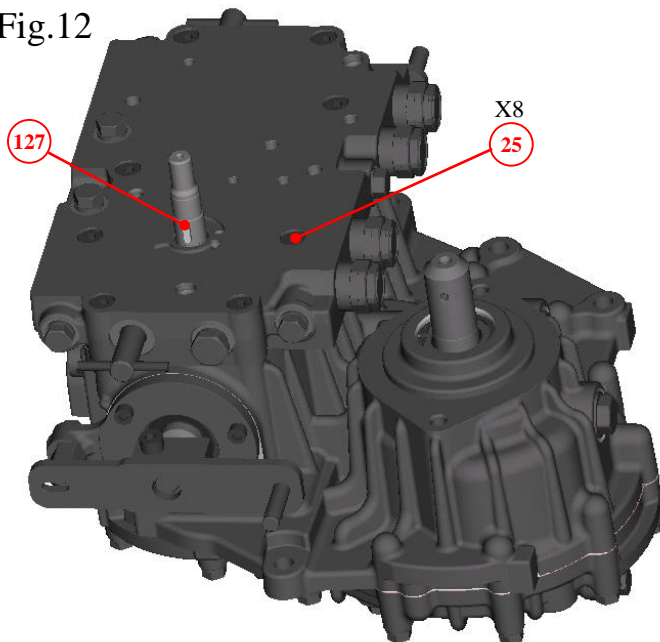


Fig.13

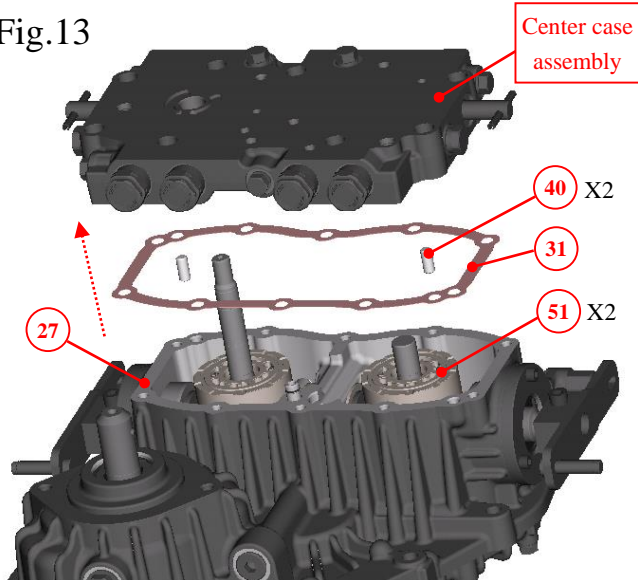
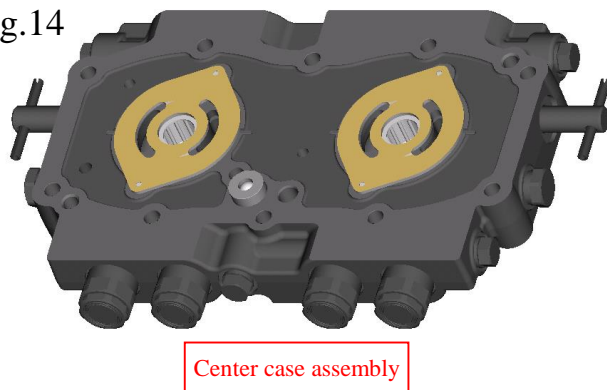
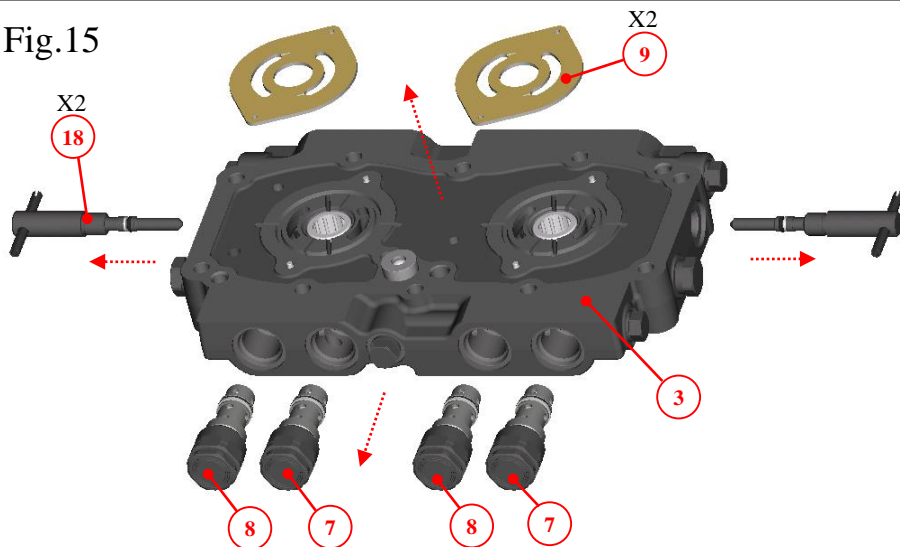


Fig.14



14.Remove two valve plates(9), two bypass valve cmp(31), two CR-valve F cmp(7) and two CR-valve R cmp(8) from center case(3). [Fig.15]

Fig.15



Center case

15. Bypass valve cmp(18)
CR-valve F cmp(7)
CR-valve R cmp(8) [Fig.16]

16. Remove two plugs(13),
two O-rings(14), spring(12),
valves(11), spring(17), valve
(16), six plugs(23) and
six O-rings(24) from center case
(3). [Fig.17]

17. Valve plate(9). [Fig.18]

Fig.16

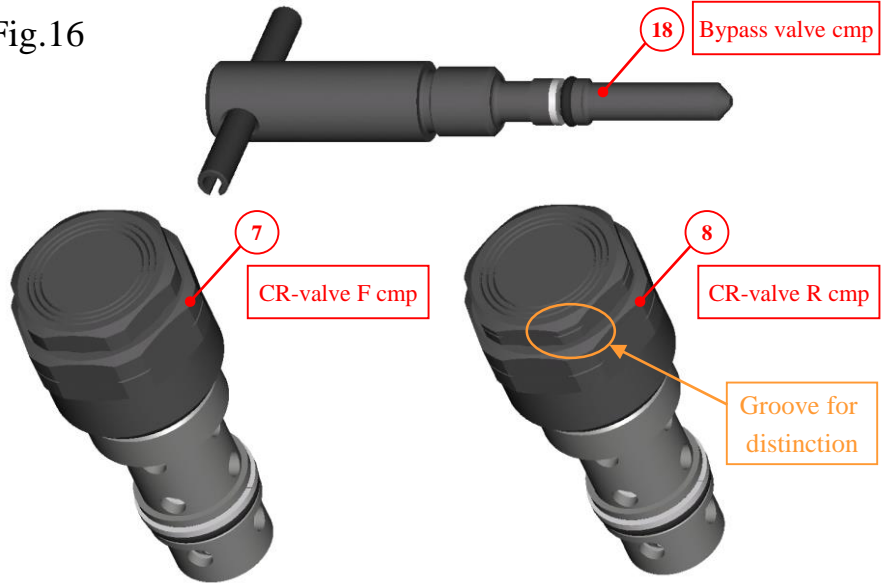


Fig.17

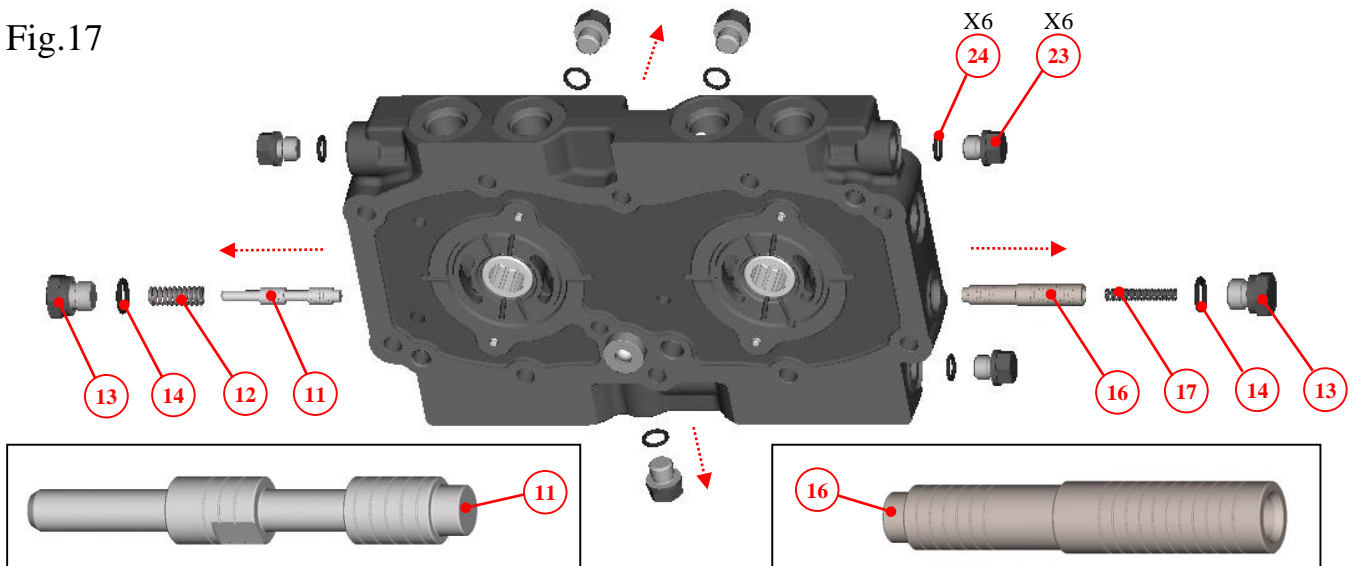
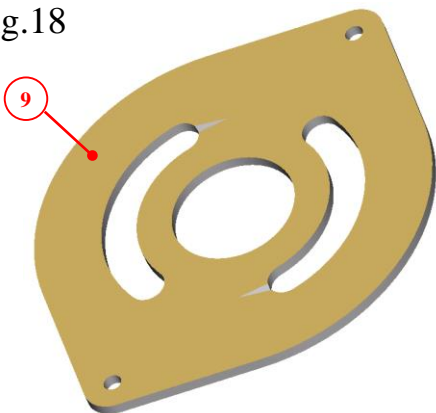


Fig.18



*Do not drop valves(11),(16) and valve plates(9).

*Avoid damage of surfaces(center case(3) and valve plates(9)).

*Inspect valve plates(9). Valve plates(9) should be flat, free of all nicks, burrs, scratches, and erosion around the port. If scratches or grooves are detected, valve plates(9) must be replaced.

Cylinder block cmp

18.Remove two cylinder block cmp(51), pipe(36) and two O-rings(34) from housing(27). [Fig.20]

19.Cylinder block cmp and piston [Fig.21]

20.Pipe-B cmp(35) [Fig.22]

21.Remove two thrust plates(61), two bolts(63) two nuts(64) and two control arms(62). [Fig.23]

*Do not drop pistons when removing cylinder block cmp(51).

*Avoid damage of surfaces(pistons(52) and cylinder blocks(55) and thrust plates(61)).

*Inspect cylinder blocks(55). Remove and inspect all pistons(52). If any damage is detected, replace cylinder block cmp(51).

Fig.19



Fig.22

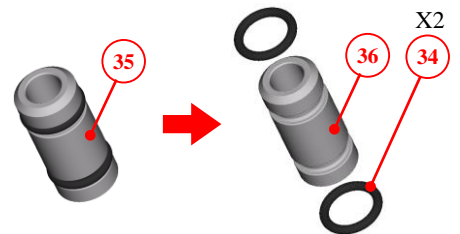


Fig.20

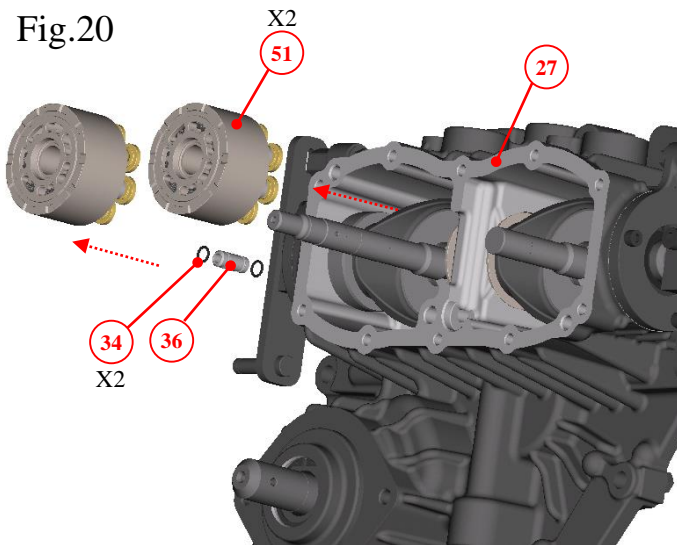


Fig.23

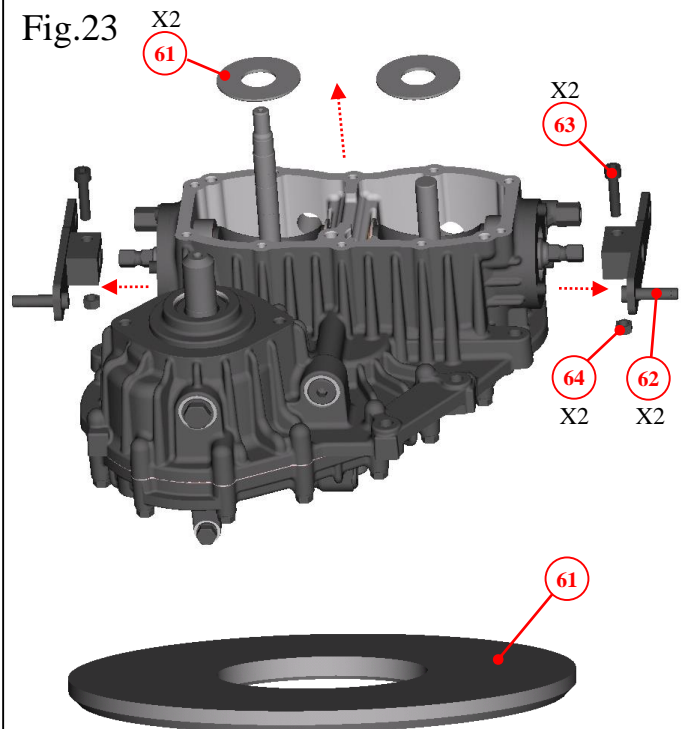
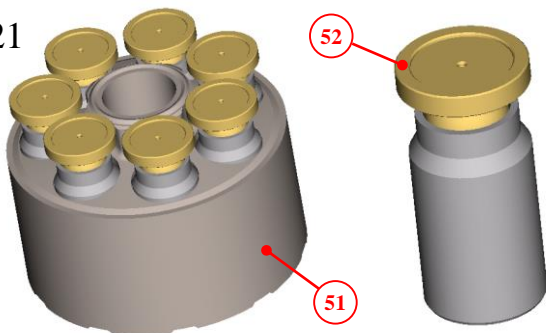


Fig.21



Housing(gear , Shaft , Gear

22.Remove plug(38) and O-ring(39) and two plugs (23) and two O-rings(24). And remove fifteen bolts (45). [Fig.24]

23.Remove housing(43), packing(44)and two pins(40) and remove ring(41), spacer(37) and oil seal(42). [Fig.25]

24.Remove shaft(input cmp and shaft(pump R cmp shaft(pump L cmp. And pipe(33) and two o-rings (34). [Fig.26]

*Peel off packing that was attached to machined surfaces(housing(27)(43)).

*Avoid damage of machined surfaces(housing(27), (43)) when peeling off packing.

Fig.24

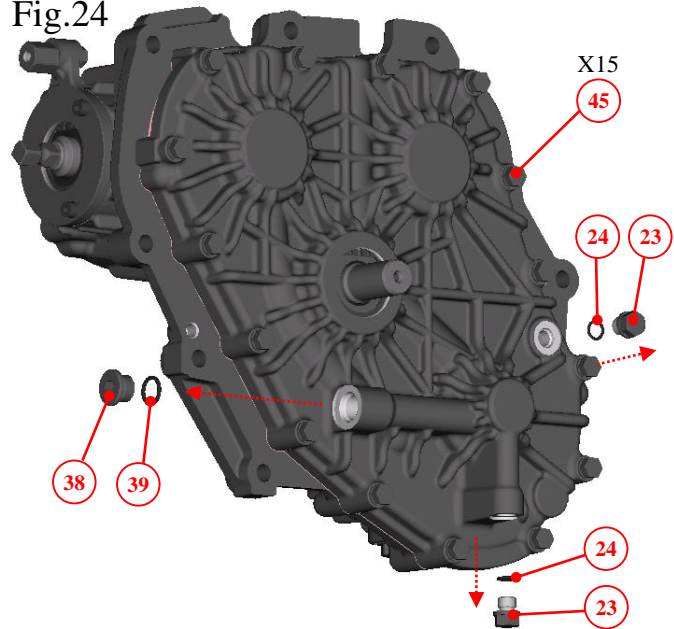


Fig.25

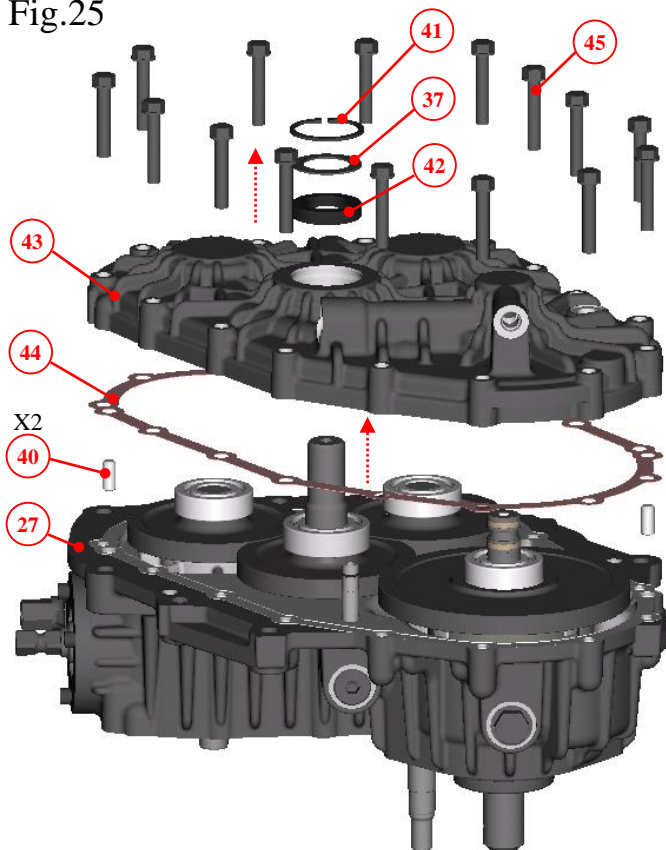
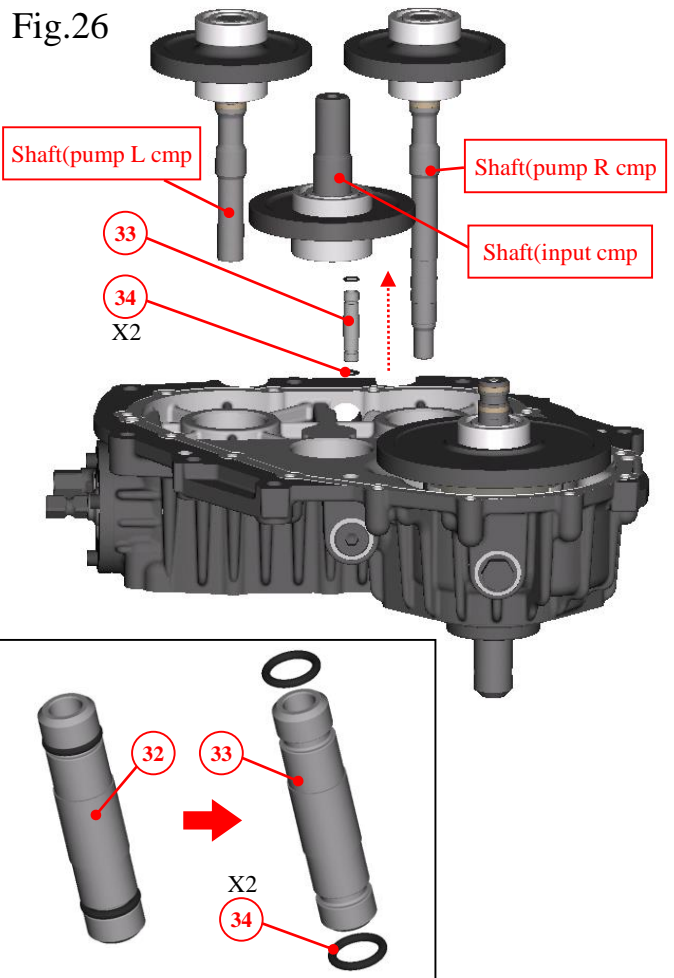


Fig.26



Shaft, gear

25.Remove two bearings(48), gear(47) from shaft(input(46). [Fig.27]

26.Remove two bearings(57), gear(50) and seal ring(56) from shaft(pump R (58). [Fig.28]

27.Remove two bearings(57), gear(50) and seal ring(56) from shaft(pump L(49). [Fig.29]

28.Remove PTO cmp from housing(27). [Fig.30]

- *Do not drop gears, shafts and bearings.
- *Avoid damage of machined surfaces (housing(27), gears, shafts).
- *If damage is detected, seal ring(56) must be replaced.

Fig.27

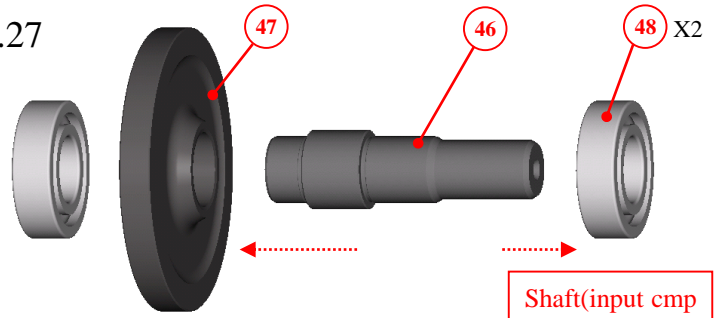


Fig.30

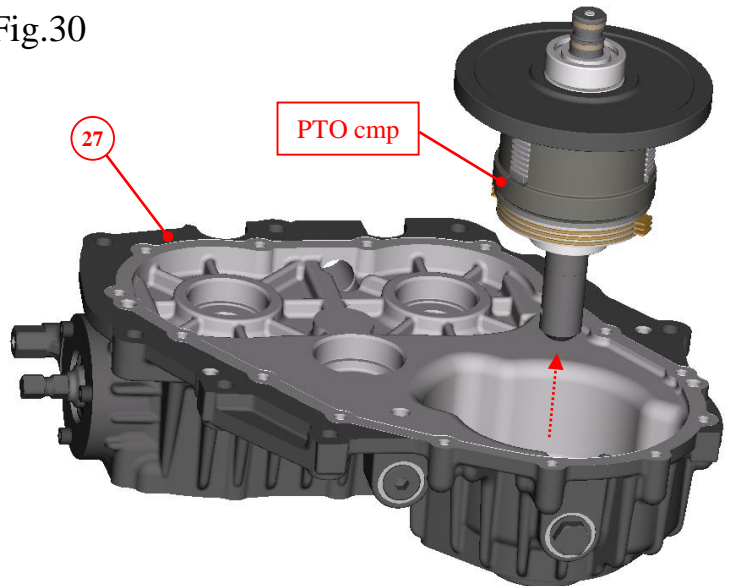


Fig.28

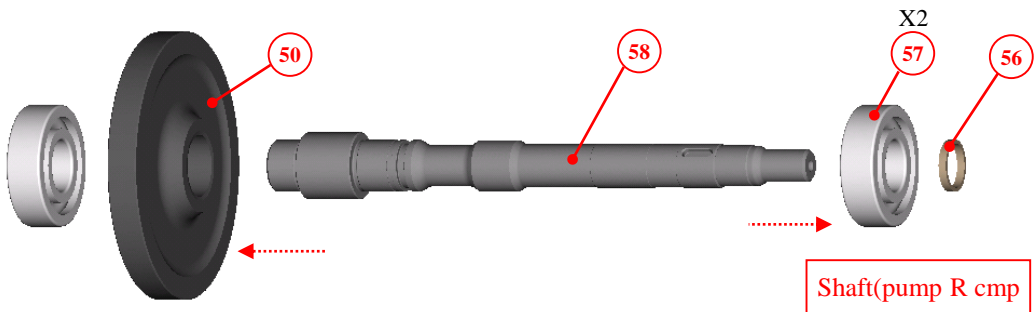
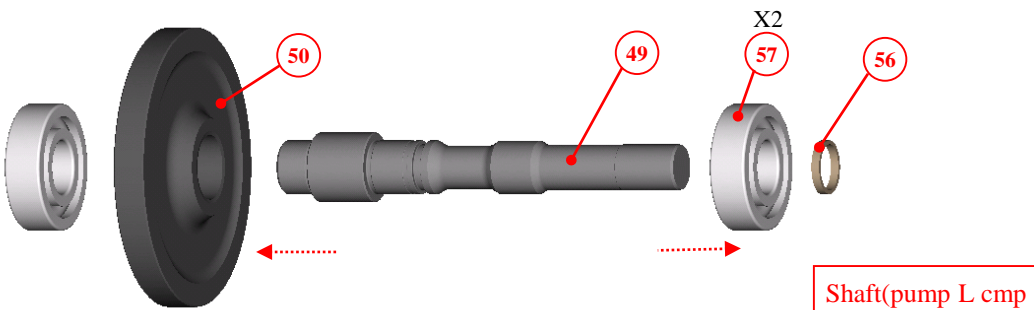


Fig.29



PTO cmp

29.Remove bearing(93), spacer(89), PTO gear cmp, clutch cylinder cmp(78), three rods(90) and key(92) from PTO cmp. [Fig.32]

30.Remove two bearings(93), ring(87) and gear(77) from PTO gear cmp. [Fig.33]

31.Remove bearing(57), B-plate(96), C-plate(97), three A-plates(95), three friction plates(98), two seal rings (56) and PTO shaft(75). [Fig.33]

*Do not drop gear(77), shaft(75) and bearings(57)(93).

*Avoid damage of machined surfaces(gear(77), shaft(74)).

*If damage is detected, seal ring(56) must be replaced.

Fig.31

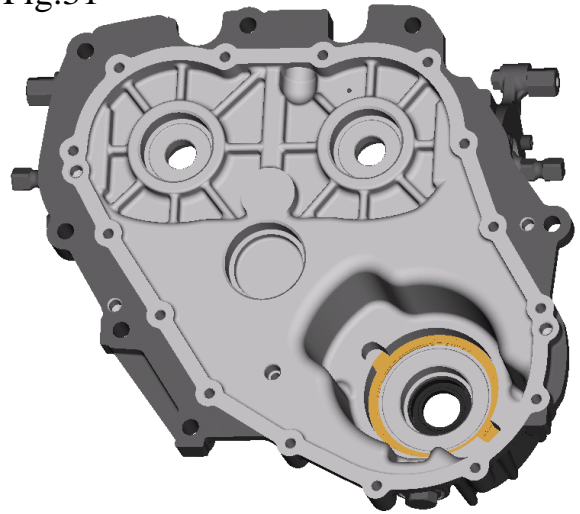


Fig.32

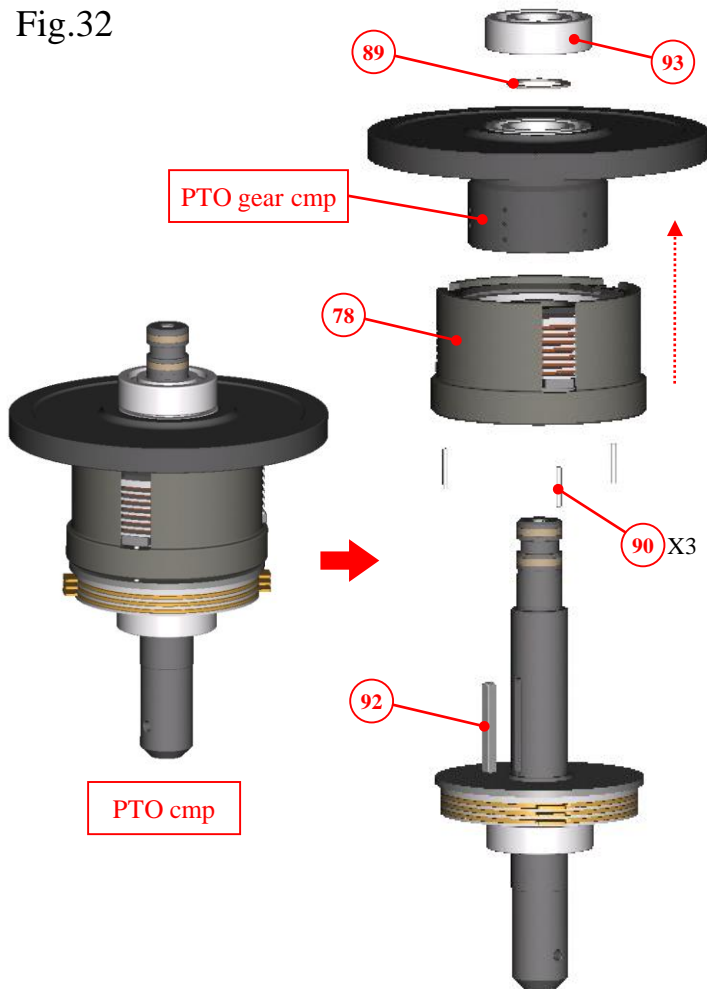
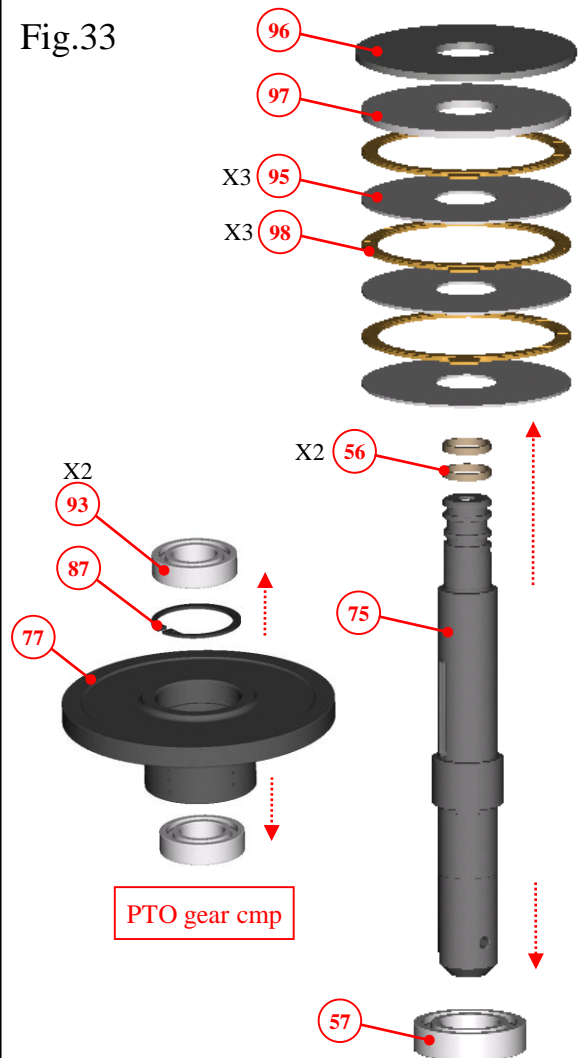


Fig.33



Housing(pump , Swash plate

31.Remove friction plate(45) from housing(27).
[Fig.34]

32.Remove ring(41), spacer(37), oil seal(42),
plugs(29)(38) and O-rings(30)(39) from
housing(27). [Fig.36]

33.Remove six bolts(68), two rings(41),
two oil seals(42) and two side cover cmp(65)
from housing(27). [Fig.37]

*If damage is detected, side cover cmp(65) must
be replaced.

Fig.34

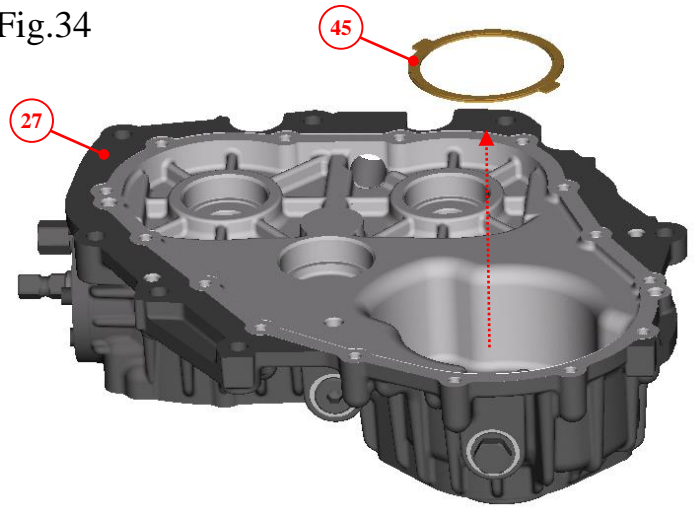


Fig.36

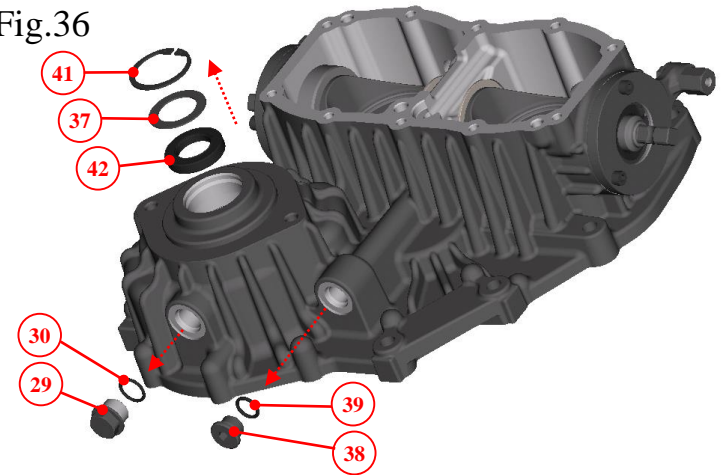


Fig.35

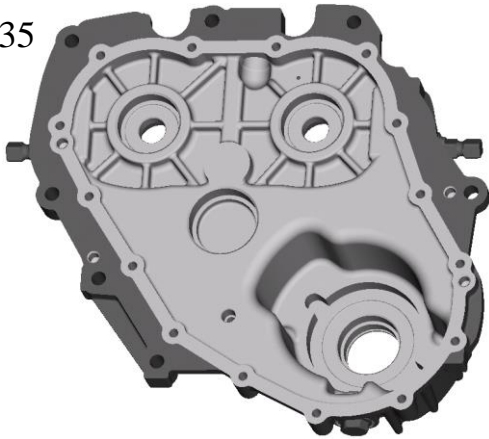
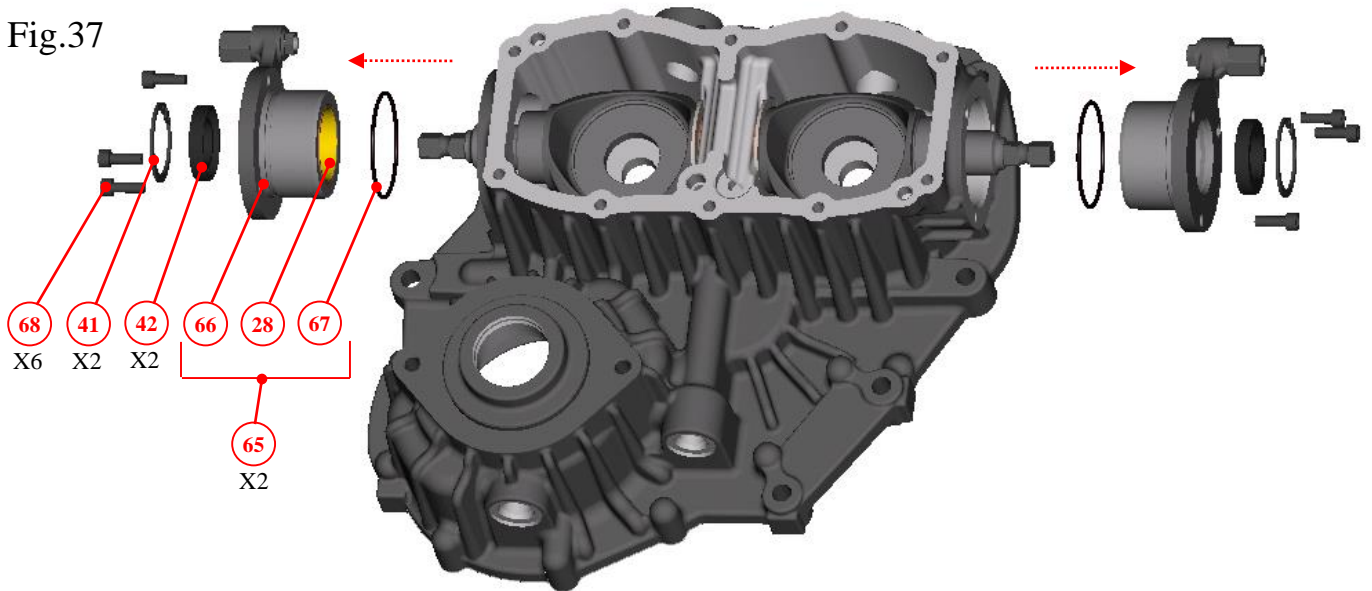


Fig.37



Housing(pump , Swash plate

34.Remove two swash plates(59) and two washers (60) from housing(27). [Fig.38]

35.Swash plate(59) [Fig.39]

36.Housing(pump cmp(26) [Fig.40]

*Do not drop swash plate(59).

*Avoid damage of machined surface(housing(27)).

Fig.38

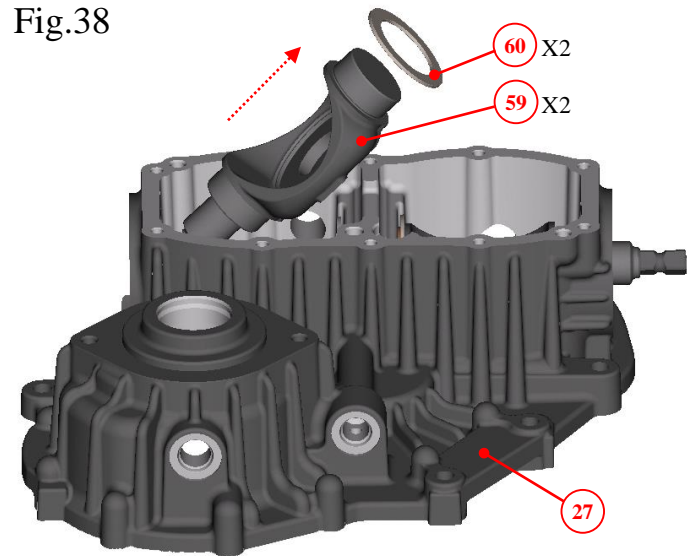


Fig.40

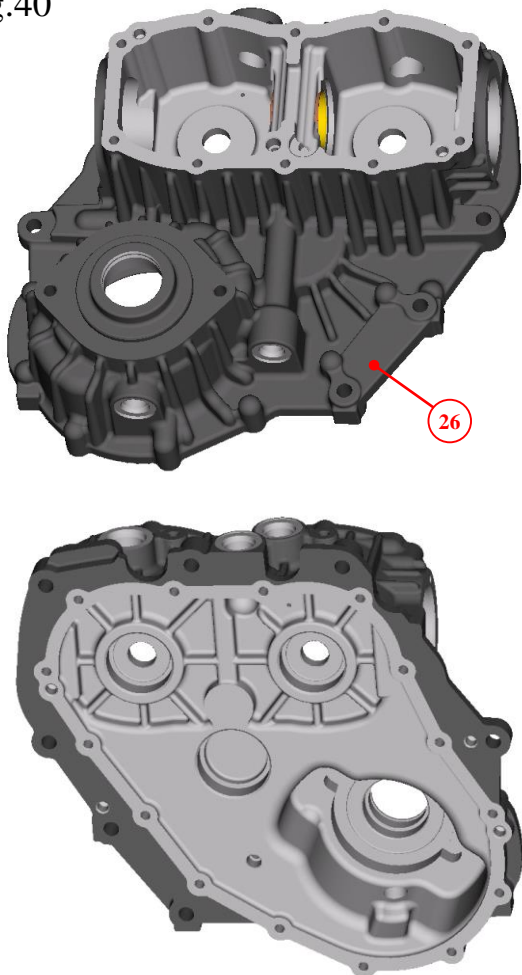


Fig.39

