

# PREFACE

1. This parts catalog is the 1st edition of 4TNV98-ZNTBL for Takeuchi Mfg. Co., Ltd.

Pub.No. : 000Y00D9780

Published : September,2007

2. Model name

| Engine model | Vehicle      |            | Vehicle made by         |
|--------------|--------------|------------|-------------------------|
|              | Products     | Model name |                         |
| 4TNV98-ZNTBL | Track Loader | TL230      | Takeuchi Mfg. Co., Ltd. |

0-1  
REF NO. PARTS NO. Description Qty I R Remarks  
Product: Takeuchi TL230 Mini Compact Excavator Parts Manual(Book No.BU1Z003/BU1Z004)  
Full Download URL: <https://www.arepairmanual.com/downloads/takeuchi-tl230-mini-compact-excavator-parts-manualbook-no-bu1z003bu1z004/>  
ENGINE  
4TNV98-ZNTBL  
2007.11.15

Sample of manual. Download All 44 pages at:

<https://www.arepairmanual.com/downloads/takeuchi-tl230-mini-compact-excavator-parts-manualbook-no-bu1z003bu1z004/>

**How to read this Parts Catalog.**

1. Parts mentioned in Parts Catalog may not necessarily be standard equipping parts
2. Parts change may be made without prior notice.
3. Form of this Parts Catalog.

| Y00F2161 29. FUEL INJECTION PUMP (W/BOOST) |      |  |                     | (A)=4JH-DT (D)=4JH-DTZA<br>(B)=4JH-DTZ (E)=4JH-DTZY<br>(C)=4JH-DTZP (F)= |     |     |     |     |     |   |   |
|--|------|--|---------------------|--|-----|-----|-----|-----|-----|---|---|
| REF.                                       | LEV. | PARTS No.  | DESCRIPTION         | QTY  |     |     |     |     |     | I | R |
|  |      |  |                     | (A)  | (B) | (C) | (D) | (E) | (F) |   |   |
| 1  |      | 729595-51390   | FUEL INJECTION PUMP | 1  | 1   | 1   | 1   | 1   | 1   |   |   |
| 1-1  | 1    | 729595-51391   | FUEL INJECTION PUMP | 1  | 1   | 1   | 1   | 1   | 1   | N | 1 |
|  |      | (A=E00185) (B=E00200)                                  |                     |  |     |     |     |     |     |   |   |
| 3  | 2    | 26022-060162   | SCREW M 6X16        | 9  | 9   | 9   | 9   | 9   | 9   |   |   |
| 1 3-1                                      | 2    | 26022-060162   | SCREW M 6X16        | 4  | 4   | 4   | 4   | 4   | 4   |   | K |
|  |      | (A=E00156) (B=E00156) (C=E00156) (D=E00156) (E=E00156) |                     |  |     |     |     |     |     |   |   |
| 4  | 2    | 129470-51040   | CAMSHFT             | 9  | 9   | 9   | 9   | 9   | 9   |   |   |
| 5  | 2    | 122710-51050   | BEARING. ROLLER     | 9  | 9   | 9   | 9   | 9   | 9   |   |   |
| 6  | 2    | 129470-51060   | RETAINER            | 9  | 9   | 9   | 9   | 9   | 9   |   |   |

Remarks  
(1) BOOST COMPENSATOR TYPE. OPTIONAL PART. TO E#00155 (4JH-DT, 4JH-DTZ)

**① Ref. No,**

The Ref. No, in the list may not be in accordance with the Ref. No, on illustration.

(Ex.) illustration No, List heed No,  
 1 1 (Before change) → 1-1 (After change)

When interchangeable symbol N, and k, illustrations for the new parts are sometimes omitted.

**② Lev. (Level)**

Indication and Meaning of Level

Level Hereunder is given the relation among the number of number (1,2,3) the level and the nominal parent-child relationship.

- 1 ---- Parent parts (Assembly parts)
- 2 ---- Child parts included in " 1 " (Semi-Assembly parts, component parts of Assembly parts.)
- 3 ---- Child parts included in " 2 ", Grand-child parts in terms of " 1 ".  
(Component parts of Semi-Assembly parts.)

Note) A parts of non-sale parts are illustrated but not listed.

**③ Change Mark**

Change Mark " I " is given to the part for which a design change was made at this time.

The design change was not shown in the last published Parts Catalog.

**④ Interchangeability Mark**

In the case where a part change took place, one of the following interchangeability marks is indicated for that part

| Symbol | Interchangeability | Contents note  |
|--------|--------------------|--|
| N      | Old ↔ New          | New Part is interchangeable for Old Part but not interchangeable conversely.     |
| Q      | Old ↔ New          | New Part is not interchangeable for Old Part but interchangeable conversely.     |
| R      | Old ↔ New          | New Part is interchangeable for Old Part and vice versa.                         |
| S      | Old ↔ New          | New Part is not interchangeable for Old Part and vice versa.                     |
| W      |                    | Part newly added.  |
| Z      |                    | Part discontinued.   |
| F      |                    | Not interchangeable single part but interchangeable by set of the related parts. |
| K      |                    | Changed only in quantity used.   |

**⑤ Effective Machine No,**

When a part is changed, Effective Machine No, of a Model for which the part is applicable is indication

In each column of (A)-(F).

| Product Symbol | Product No,               | Product Symbol | Product No, |
|----------------|---------------------------|----------------|-------------|
| C              | Clutch No, Compressor No, | M              | Machine No, |
| D              | Drive No,                 | T              | Tractor No, |
| E              | Engine No,                | Note 1)※       | Date        |

Note 1) Date may follow the symbol in some cases.(Ex.) ※1996.01

Note 2) As far as engine models shown by " XXX " are concerned, the modification of the parts could not be Predicted or the engine models themselves could not be identified.

Note 3) (A=E#00185) means that the design change on the part has been effective for the model at the, column (A) (in the case, for 4JH-DT) on and from E/(Engine Serial Number) 00185

**⑥ Remarks Mark**

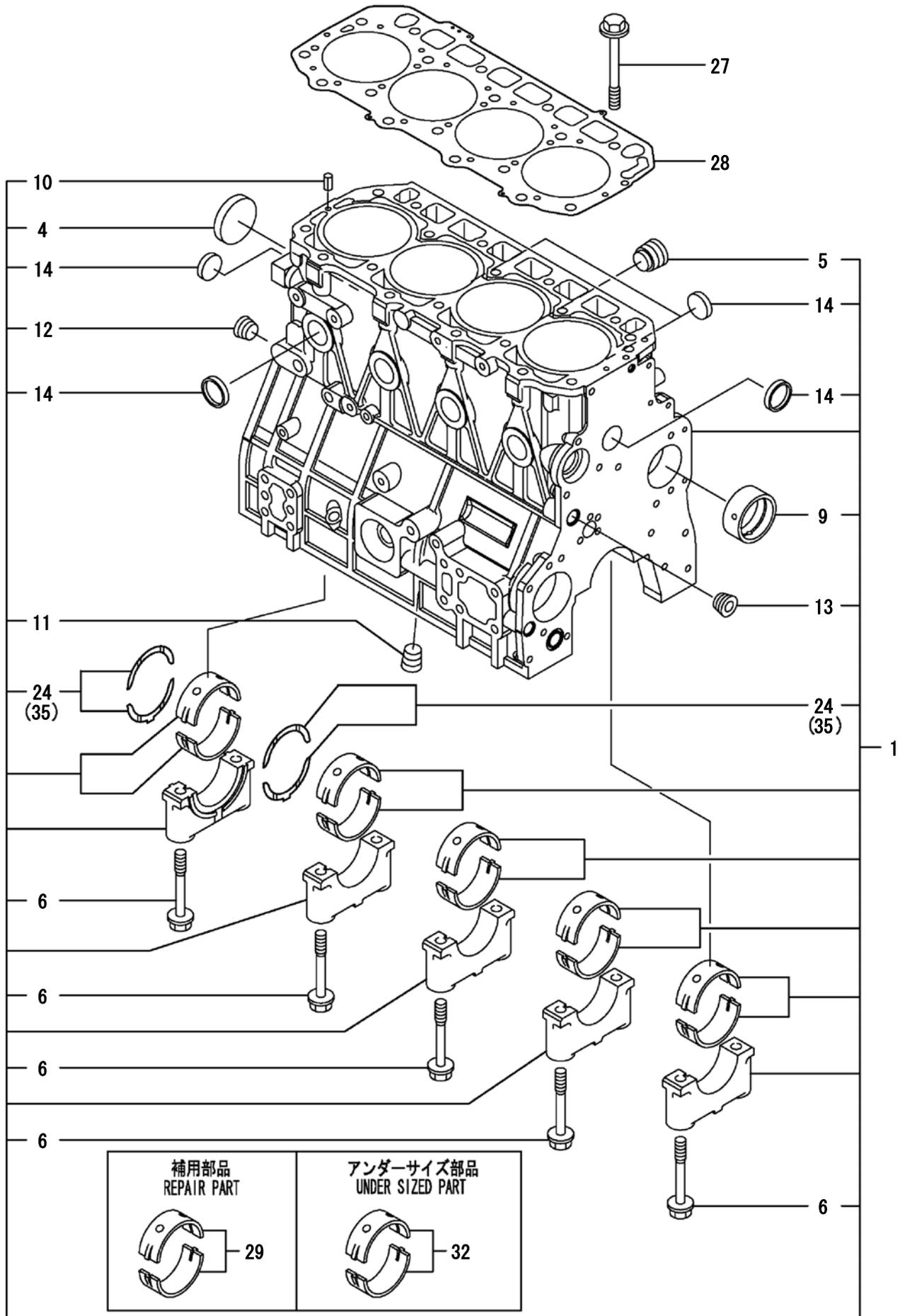
Figures or alphabets (Symbols) are entered in the remark column.

The comments (remarks) on the pertinent parts are indicated in the lower part of the list by the same symbols a those stated above.

| PAGE  | DESCRIPTION                    |
|-------|--------------------------------|
| fig01 | CYLINDER BLOCK                 |
| fig02 | GEAR HOUSING                   |
| fig03 | FLYWHEEL HOUSING & OIL SUMP    |
| fig04 | CYLINDER HEAD & BONNET         |
| fig05 | SUCTION MANIFOLD & AIR CLEANER |
| fig06 | EXHAUST MANIFOLD & SILENCER    |
| fig07 | CAMSHAFT & DRIVING GEAR        |
| fig08 | CRANKSHAFT & PISTON            |
| fig09 | LUB.OIL SYSTEM                 |
| fig10 | COOLING WATER SYSTEM           |
| fig11 | FUEL INJECTION PUMP            |
| fig12 | GOVERNOR                       |
| fig13 | FUEL INJECTION VALVE           |
| fig14 | FUEL LINE                      |
| fig15 | STARTING MOTOR                 |
| fig16 | GENERATOR                      |
| fig17 | ELECTRIC PARTS                 |
| fig18 | GASKET SET                     |

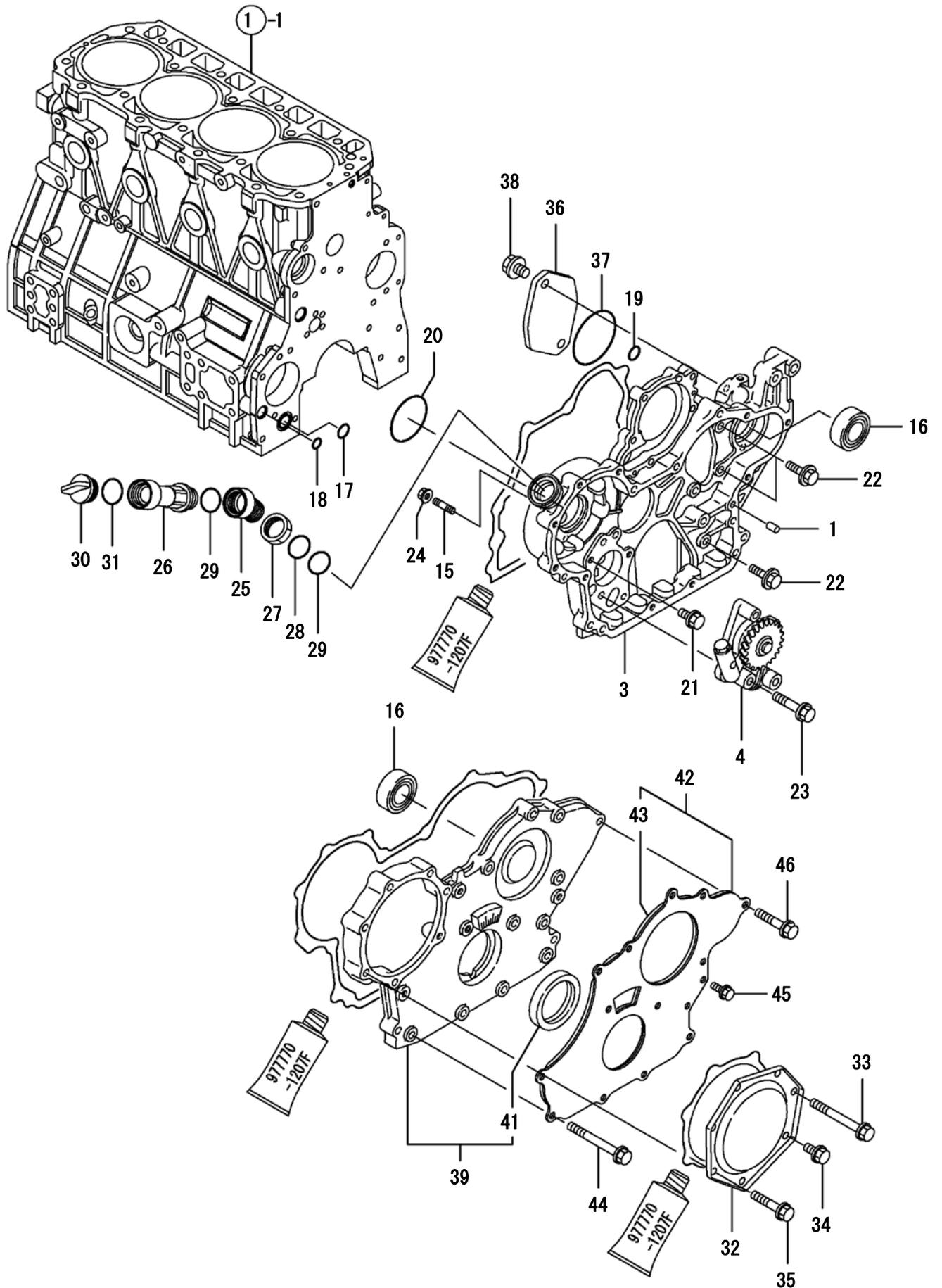
Memo

Engine for TL230 4TNV98-ZNTBL  
CYLINDER BLOCK



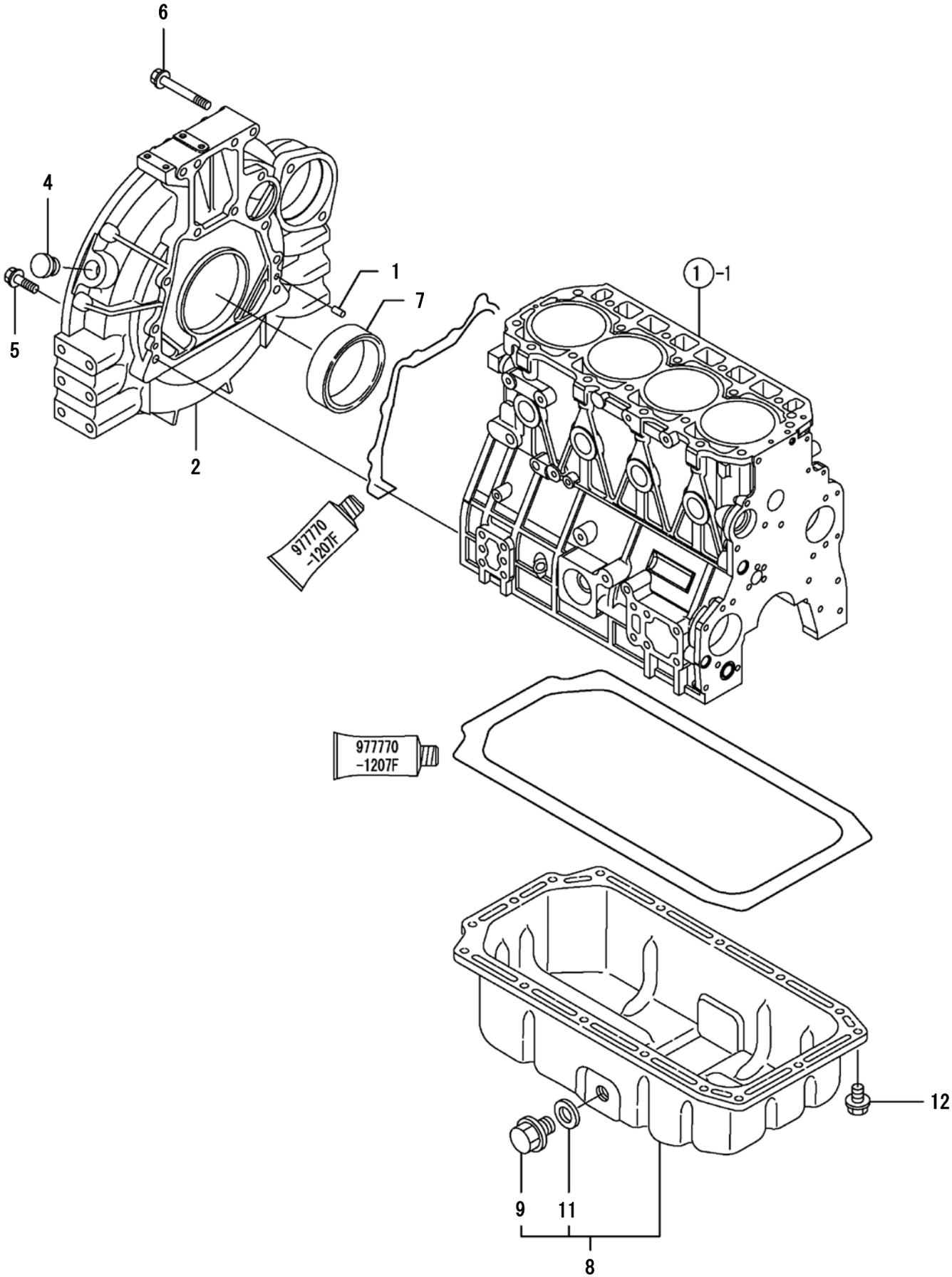
| REF NO. | PARTS NO.    | Description            | シリンダブロック |  | CYLINDER BLOCK |     | Remarks                       |
|---------|--------------|------------------------|----------|--|----------------|-----|-------------------------------|
|         |              |                        | Q'ty     |  | I              | R   |                               |
| 1       | 729927-01560 | BLOCK ASSY, CYLINDER   | 1        |  |                |     |                               |
| 4       | 129900-01250 | · PLUG 55              | 1        |  |                |     |                               |
| 5       | 171051-01921 | · PLUG                 | 1        |  |                |     |                               |
| 6       | 129900-02020 | · BOLT, METAL CAP      | 10       |  |                |     |                               |
| 9       | 129900-02410 | · BUSH, CAMSHAFT       | 1        |  |                |     |                               |
| 10      | 22351-060012 | · SPRING PIN 6X12      | 2        |  |                |     |                               |
| 11      | 23876-030000 | · PLUG PT3/8, SCREW    | 1        |  |                |     |                               |
| 12      | 23876-030000 | · PLUG PT3/8, SCREW    | 1        |  |                |     |                               |
| 13      | 23876-030000 | · PLUG PT3/8, SCREW    | 1        |  |                |     |                               |
| 14      | 27241-300000 | · PLUG 30              | 8        |  |                |     |                               |
| 24      | 129900-02931 | · BEARING ASSY, THRUST | 2        |  |                |     |                               |
| 27      | 129900-01200 | BOLT, HEAD             | 18       |  |                |     |                               |
| 28      | 129907-01331 | GASKET, CYLINDER HEAD  | 1        |  |                |     |                               |
| 29      | 729900-02801 | MAIN BEARING SET       | 5        |  |                | (1) | REPAIR PART.                  |
| 32      | 129900-02341 | MAIN BEARING US=0.25   | 5        |  |                | (2) | UNDER-SIZED (U. S=0.25) PART. |
| 35      | 129900-02941 | BEARING, THRUST .250S  | 2        |  |                | (3) | OVER-SIZED (O. S=0.25) PART.  |

Engine for TL230 4TNV98-ZNTBL  
GEAR HOUSING



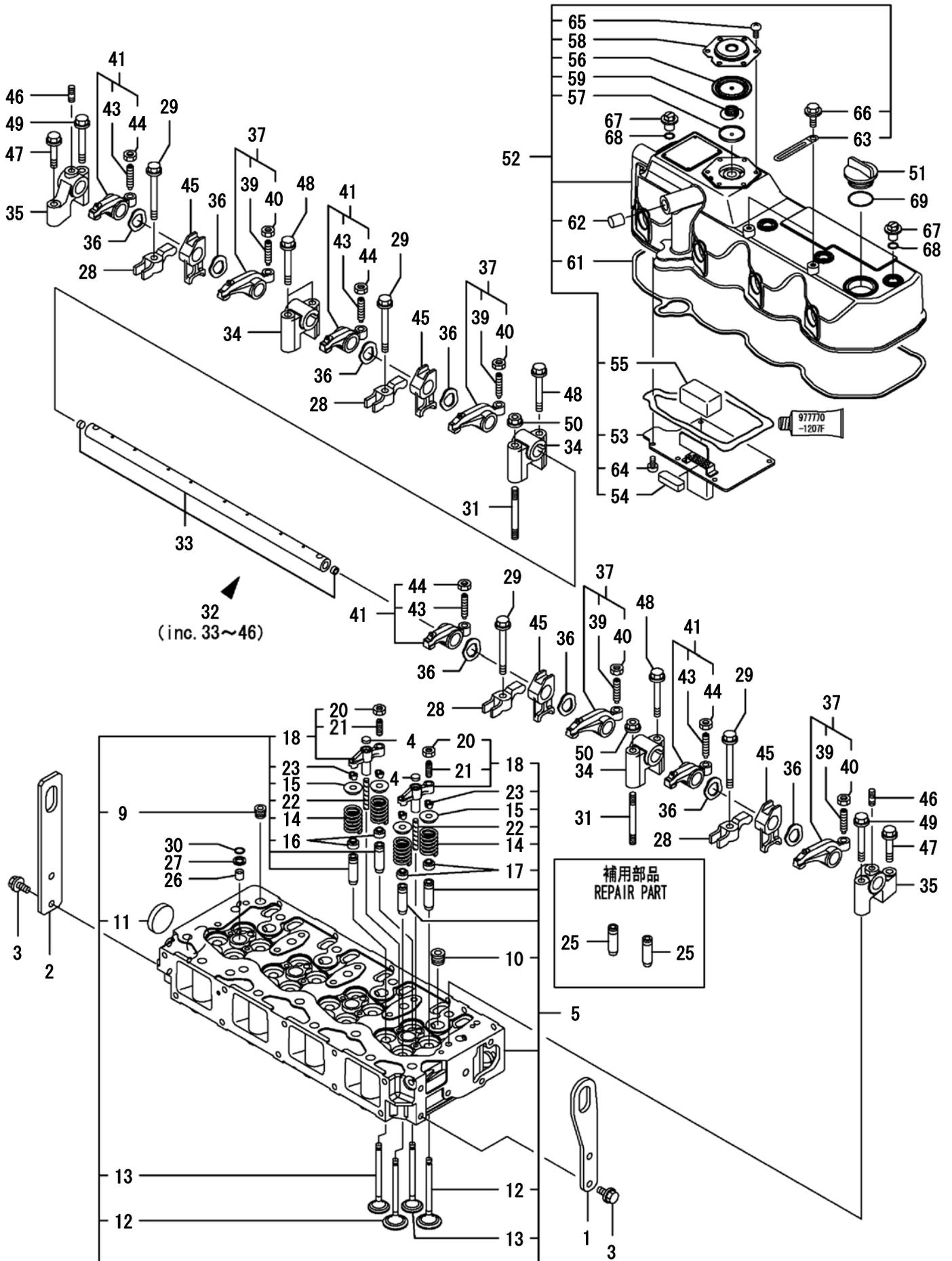
| REF NO. | PARTS NO.    | Description            | ギヤケース<br>Q'ty | GEAR HOUSING<br>I R | Remarks |
|---------|--------------|------------------------|---------------|---------------------|---------|
| 1       | 129100-01580 | PARALLEL PIN 8X16      | 4             |                     |         |
| 3       | 129962-01500 | CASE, GEAR             | 1             |                     |         |
| 4       | 129900-32001 | PUMP ASSY, LUB. OIL    | 1             |                     |         |
| 15      | 26216-100302 | STUD BOLT              | 4             |                     |         |
| 16      | 129900-26250 | BALL BEARING           | 2             |                     |         |
| 17      | 129900-32030 | O-RING P20             | 1             |                     |         |
| 18      | 129900-32040 | O-RING P14             | 1             |                     |         |
| 19      | 24311-000070 | O-RING 1A P-7.0        | 1             |                     |         |
| 20      | 24351-030750 | PACKING, 3075          | 1             |                     |         |
| 21      | 26106-080162 | BOLT M 8X 16 PLATED    | 1             |                     |         |
| 22      | 26106-080202 | BOLT M 8X 20 PLATED    | 3             |                     |         |
| 23      | 26106-080452 | BOLT M 8X 45 PLATED    | 3             |                     |         |
| 24      | 26306-100002 | NUT                    | 4             |                     |         |
| 25      | 119225-11740 | ADAPTOR, OIL FILLER    | 1             |                     |         |
| 26      | 121027-11743 | PIPE                   | 1             |                     |         |
| 27      | 119225-11750 | NUT, OIL FILLER        | 1             |                     |         |
| 28      | 24311-000300 | O-RING 1A P-30.0       | 1             |                     |         |
| 29      | 24311-000320 | O-RING 1A P-32.0       | 2             |                     |         |
| 30      | 124160-01751 | COVER, FILLER          | 1             |                     |         |
| 31      | 24311-000320 | O-RING 1A P-32.0       | 1             |                     |         |
| 32      | 129900-01740 | COVER, F. I. PUMP      | 1             |                     |         |
| 33      | 129001-91810 | BOLT M8X70, AUTO       | 1             |                     |         |
| 34      | 26106-080162 | BOLT M 8X 16 PLATED    | 1             |                     |         |
| 35      | 26106-080402 | BOLT M 8X 40 PLATED    | 5             |                     |         |
| 36      | 121023-26070 | COVER, HO-P            | 1             |                     |         |
| 37      | 24321-000850 | O-RING 1A G-85.0       | 1             |                     |         |
| 38      | 26106-100202 | BOLT M10X 20 PLATED    | 2             |                     |         |
| 39      | 729906-01550 | HOUSING ASSY, COVER, G | 1             |                     |         |
| 41      | 129916-01800 | SEAL, OIL              | 1             |                     |         |
| 42      | 129900-01850 | COVER ASSY             | 1             |                     |         |
| 43      | 129900-01870 | SPONGE                 | 1             |                     |         |
| 44      | 129001-91810 | BOLT M8X70, AUTO       | 6             |                     |         |
| 45      | 26106-080162 | BOLT M 8X 16 PLATED    | 3             |                     |         |
| 46      | 26106-080402 | BOLT M 8X 40 PLATED    | 5             |                     |         |

Engine for TL230 4TNV98-ZNTBL  
FLYWHEEL HOUSING & OIL SUMP



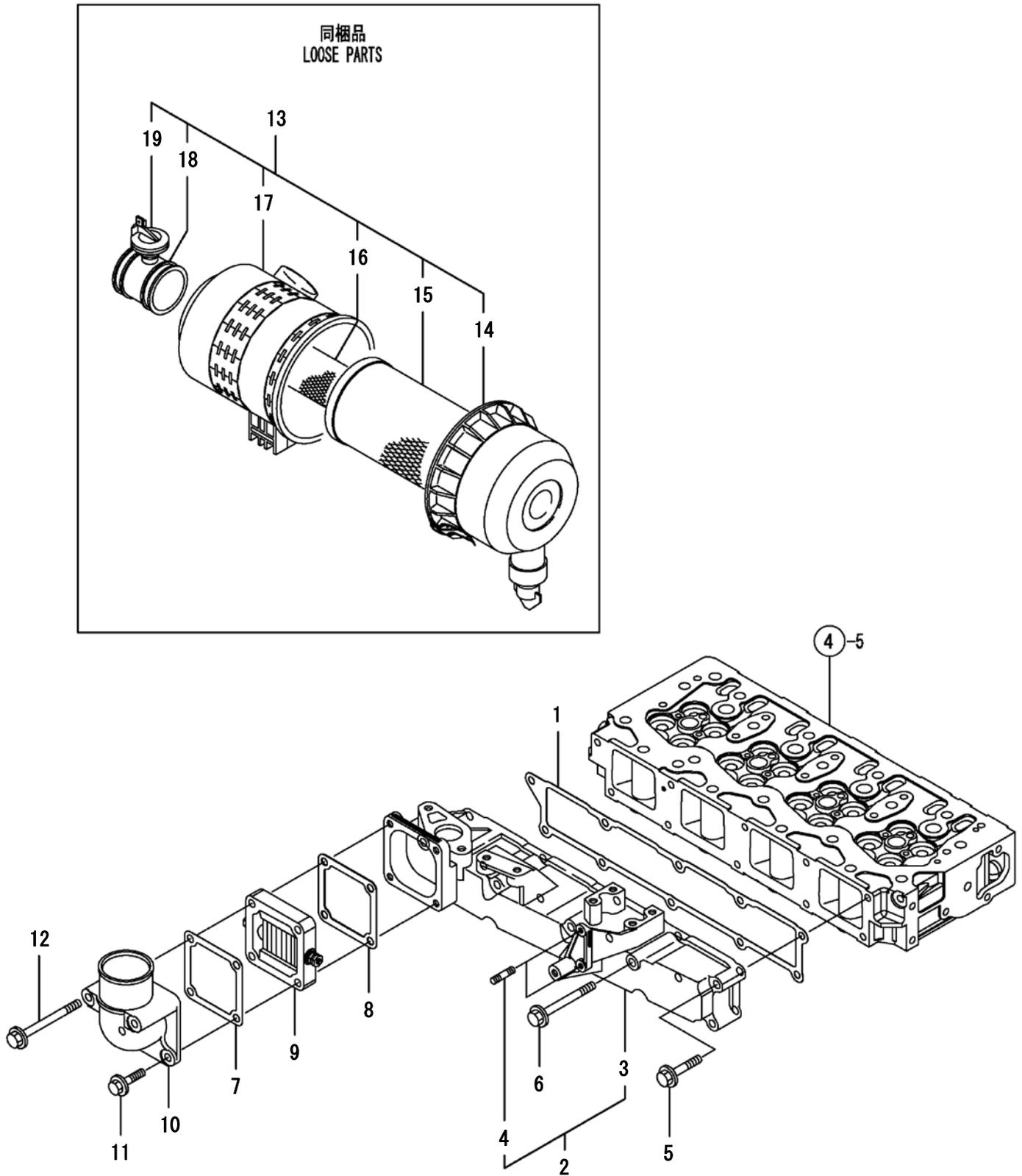
| REF NO. | PARTS NO.    | フライホイールハウジング & オイルパン<br>Description | Q'ty | FLYWHEEL HOUSING & OIL SUMP<br>R Remarks |
|---------|--------------|-------------------------------------|------|--|
| 1       | 129100-01580 | PARALLEL PIN 8X16                   | 2    |  |
| 2       | 129953-01620 | HOUSING, FLYWHEEL                   | 1    |  |
| 4       | 119620-01750 | CAP, FLYWHEEL COVER                 | 1    |  |
| 5       | 26206-100352 | BOLT M10X 35 PLATED                 | 9    |  |
| 6       | 26206-100702 | BOLT M10X 70 PLATED                 | 4    |  |
| 7       | 129916-01790 | SEAL, OIL                           | 1    |  |
| 8       | 129902-01710 | SUMP ASSY, OIL                      | 1    |  |
| 9       | 119640-01640 | DRAIN PLUG M22                      | 1    |  |
| 11      | 22190-220002 | SEAL WASHER 22S                     | 1    |  |
| 12      | 26106-080122 | BOLT M 8X 12 PLATED                 | 16   |  |

Engine for TL230 4TNV98-ZNTBL  
CYLINDER HEAD & BONNET



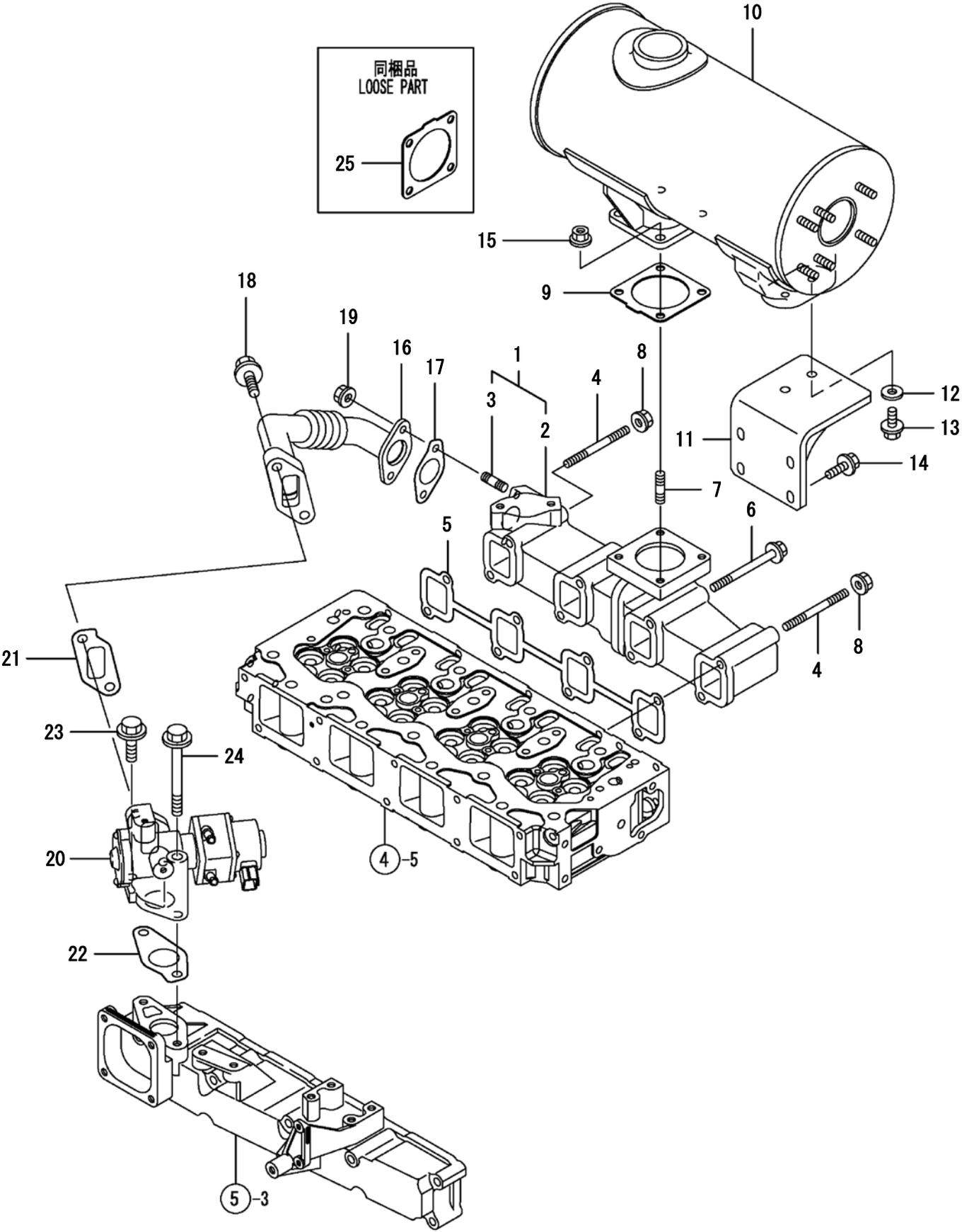
| REF NO. | PARTS NO.    | シリンダヘッド & ホンネット         |      | CYLINDER HEAD & BONNET |                    |
|---------|--------------|-------------------------|------|------------------------|--------------------|
|         |              | Description             | Q'ty | I                      | R                  |
| 1       | 129907-07900 | LIFTER, ENGINE          | 1    |                        |                    |
| 2       | 129944-07910 | LIFTER, ENGINE          | 1    |                        |                    |
| 3       | 26106-080162 | BOLT M 8X 16 PLATED     | 4    |                        |                    |
| 4       | 123907-11550 | SEAT A, VALVE BRIDGE    | 8    |                        |                    |
| 5       | 129927-11700 | HEAD ASSY, CYLINDER     | 1    |                        |                    |
| 9       | 23876-020000 | · PLUG PT1/4, SCREW     | 1    |                        |                    |
| 10      | 23876-030000 | · PLUG PT3/8, SCREW     | 4    |                        |                    |
| 11      | 27241-400000 | · PLUG 40               | 1    |                        |                    |
| 12      | 129907-11100 | · VALVE (INT            | 8    |                        |                    |
| 13      | 129907-11110 | · VALVE (EXH            | 8    |                        |                    |
| 14      | 129907-11120 | · VALVE SPRING          | 16   |                        |                    |
| 15      | 119620-11180 | · RETAINER, SPRING      | 16   |                        |                    |
| 16      | 119803-11340 | · SEAL, VALVE STEM (EXH | 8    |                        |                    |
| 17      | 124160-11340 | · SEAL, VALVE STEM (INT | 8    |                        |                    |
| 18      | 129907-11510 | · BRIDGE ASSY, VALVE    | 8    |                        |                    |
| 20      | 129150-11750 | · · NUT M8XP1.0         | 8    |                        |                    |
| 21      | 123907-11830 | · · SCRW, VALVE BRIDGE  | 8    |                        |                    |
| 22      | 123907-11820 | · GUIDE, VALVE BRIDGE   | 8    |                        |                    |
| 23      | 27310-070001 | · COTTER ASSY           | 16   |                        |                    |
| 25      | 129907-11800 | GUIDE, VALVE            | 16   |                        | (1) OPTIONAL PART. |
| 26      | 119802-11870 | PROTECTOR, NOZZLE       | 4    |                        |                    |
| 27      | 119625-11880 | SEAT, NOZZLE            | 4    |                        |                    |
| 28      | 129907-11910 | RETAINER, F. I. VALVE   | 4    |                        |                    |
| 29      | 129907-11950 | FLANGE BOLT, RETAINER   | 4    |                        |                    |
| 30      | 24311-000120 | O-RING 1A P 12.0        | 4    |                        |                    |
| 31      | 119593-11301 | BOLT 8X80               | 2    |                        |                    |
| 32      | 129907-11341 | SUPPORT CMP             | 1    |                        |                    |
| 33      | 129907-11250 | · SHAFT, ROCKER ARM     | 1    |                        |                    |
| 34      | 129907-11260 | · SUPPORT A             | 3    |                        |                    |
| 35      | 129907-11270 | · SUPPORT B             | 2    |                        |                    |
| 36      | 123907-11280 | · WAVE WASHER           | 8    |                        |                    |
| 37      | 129907-11650 | · ARM ASSY, ROCKER      | 4    |                        |                    |
| 39      | 129150-11230 | · · SCREW, VALVE        | 4    |                        |                    |
| 40      | 129150-11750 | · · NUT M8XP1.0         | 4    |                        |                    |
| 41      | 129907-11660 | · ARM ASSY, ROCKER      | 4    |                        |                    |
| 43      | 129150-11230 | · · SCREW, VALVE        | 4    |                        |                    |
| 44      | 129150-11750 | · · NUT M8XP1.0         | 4    |                        |                    |
| 45      | 129907-11920 | · PEDESTAL, RETAINER    | 4    |                        |                    |
| 46      | 26226-080222 | · STUD M 8X 22 PLATED   | 2    |                        |                    |
| 47      | 26106-080402 | BOLT M 8X 40 PLATED     | 2    |                        |                    |
| 48      | 26106-080602 | BOLT M 8X 60 PLATED     | 4    |                        |                    |
| 49      | 26106-080602 | BOLT M 8X 60 PLATED     | 2    |                        |                    |
| 50      | 26306-080002 | NUT                     | 2    |                        |                    |
| 51      | 124160-01751 | COVER, FILLER           | 1    |                        |                    |
| 52      | 129927-11320 | BONNET ASSY             | 1    |                        |                    |
| 53      | 129907-03011 | · BAFFLE PLATE          | 1    |                        |                    |
| 54      | 129907-03061 | · BAFFLE                | 1    |                        |                    |
| 55      | 129907-03070 | · BAFFLE                | 1    |                        |                    |
| 56      | 123907-03100 | · DIAPHRAGM, BREATHER   | 1    |                        |                    |
| 57      | 123907-03110 | · CENTER PLATE          | 1    |                        |                    |
| 58      | 123907-03120 | · PLATE, BREATHER       | 1    |                        |                    |
| 59      | 123907-03140 | · SPRING, DIAPHRAGM     | 1    |                        |                    |
| 61      | 129933-11310 | · GASKET, BONNET        | 1    |                        |                    |
| 62      | 119640-61400 | · PLUG                  | 1    |                        |                    |
| 63      | 175339-79700 | · CLIP                  | 2    |                        |                    |
| 64      | 22857-500100 | · SCREW 5X10, TAPPING   | 6    |                        |                    |
| 65      | 22857-500100 | · SCREW 5X10, TAPPING   | 6    |                        |                    |
| 66      | 26106-060122 | · BOLT M 6X 12 PLATED   | 2    |                        |                    |
| 67      | 124160-11360 | KNOB                    | 4    |                        |                    |
| 68      | 24311-000120 | O-RING 1A P 12.0        | 4    |                        |                    |
| 69      | 24311-000320 | O-RING 1A P-32.0        | 1    |                        |                    |

Engine for TL230 4TNV98-ZNTBL  
SUCTION MANIFOLD & AIR CLEANER



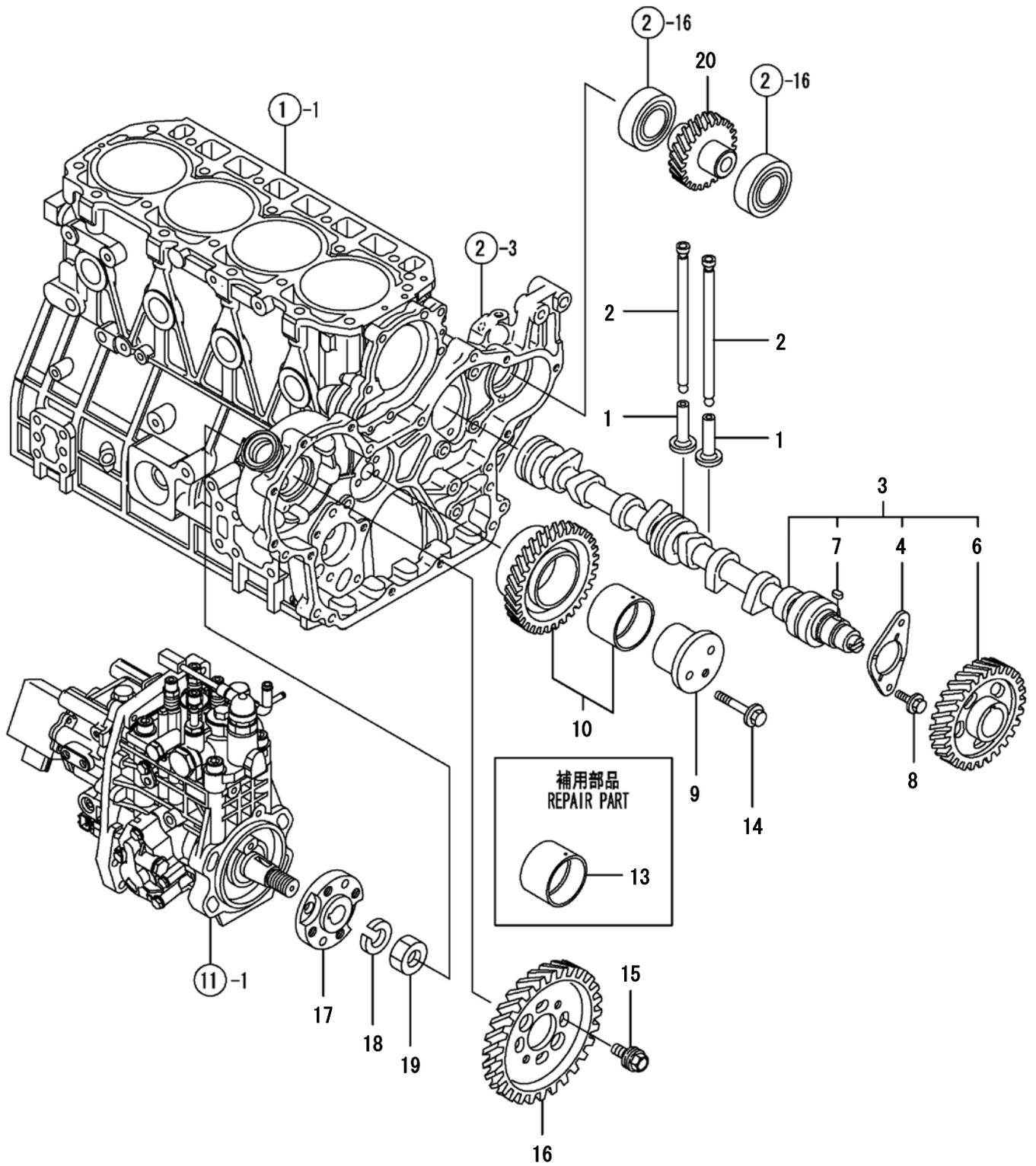
| REF NO. | PARTS NO.    | キユキマニホ-ルト & エアクリ-ナ<br>Description | Q'ty | I | R | Remarks |
|---------|--------------|-----------------------------------|------|---|---|---------|
| 1       | 129907-12110 | PACKING (INT. MANIFOLD            | 1    |   |   |         |
| 2       | 129927-12150 | MANIFOLD CMP, INTAKE              | 1    |   |   |         |
| 3       | 129927-12100 | · MANIFOLD, INTAKE                | 1    |   |   |         |
| 4       | 26216-060202 | · STUD M 6X 20 PLATED             | 2    |   |   |         |
| 5       | 26106-080452 | BOLT M 8X 45 PLATED               | 6    |   |   |         |
| 6       | 26106-080802 | BOLT M 8X 80 PLATED               | 4    |   |   |         |
| 7       | 119129-77020 | GASKET                            | 1    |   |   |         |
| 8       | 121850-77021 | GASKET, (NON-ASB.)                | 1    |   |   |         |
| 9       | 119005-77050 | HEATER, AIR                       | 1    |   |   |         |
| 10      | 119129-77520 | BEND                              | 1    |   |   |         |
| 11      | 26106-080402 | BOLT M 8X 40 PLATED               | 2    |   |   |         |
| 12      | 26106-080902 | BOLT M 8X 90 PLATED               | 2    |   |   |         |
| 13      | 129939-12510 | CLEANER ASSY, AIR                 | 1    |   |   |         |
| 14      | 129939-12610 | · HOUSING BOTTOM                  | 1    |   |   |         |
| 15      | 129939-12620 | · MAIN ELEMENT                    | 1    |   |   |         |
| 16      | 129939-12630 | · SECONDARY ELEMENT               | 1    |   |   |         |
| 17      | 129939-12640 | · BLACKET                         | 1    |   |   |         |
| 18      | 129939-12650 | · CONNECTINNG SOCKET              | 1    |   |   |         |
| 19      | 129948-12660 | · SERVICE SWITCH                  | 1    |   |   |         |

Engine for TL230 4TNV98-ZNTBL  
**EXHAUST MANIFOLD & SILENCER**



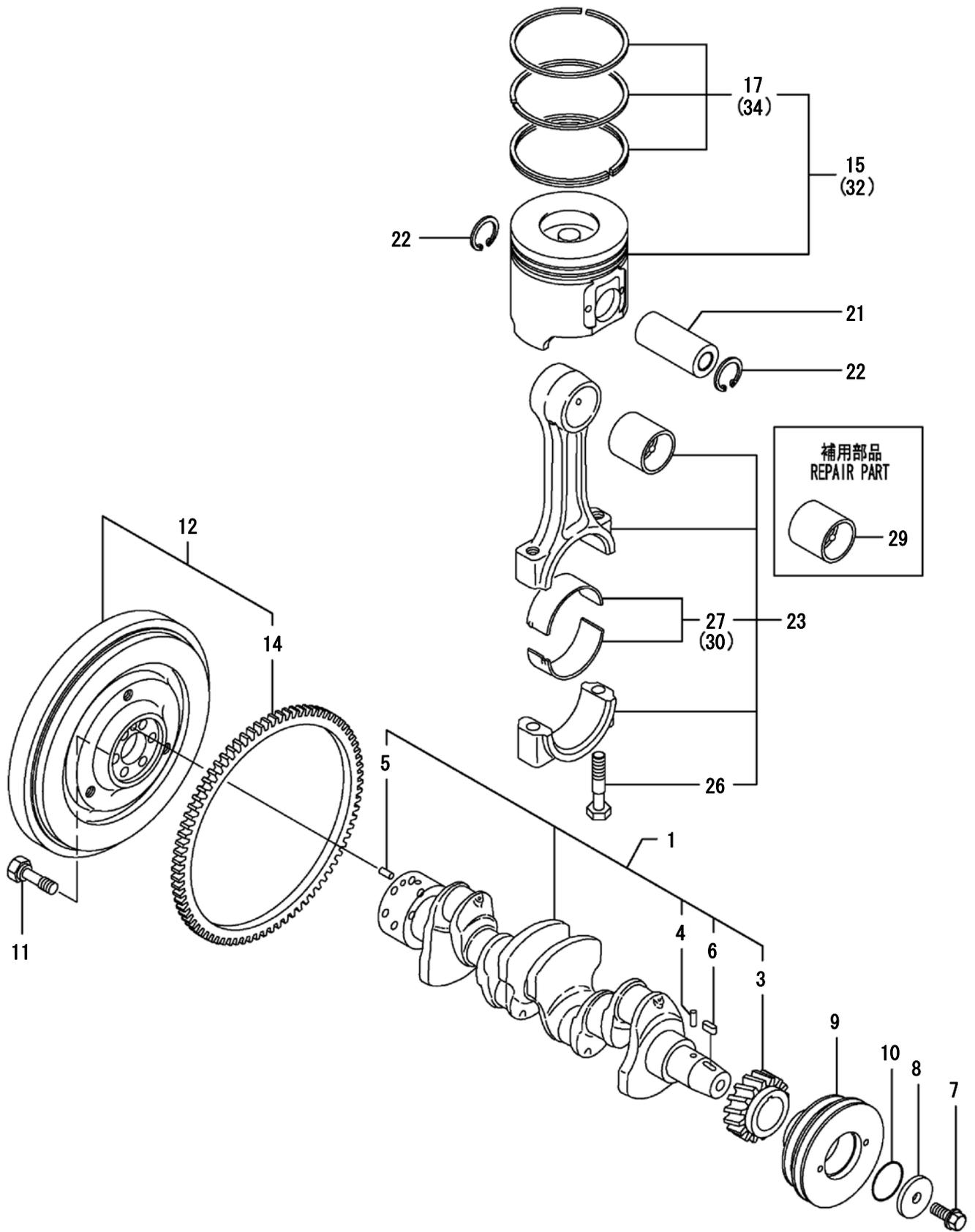
| REF NO. | PARTS NO.    | ハイキマニホールド & サイレンサ<br>Description | Q'ty | EXHAUST MANIFOLD & SILENCER<br>I R Remarks |
|---------|--------------|----------------------------------|------|--|
| 1       | 129927-13150 | MANIFOLD ASSY, EXH               | 1    |  |
| 2       | 129927-13100 | MANIFOLD, EXHAUST                | 1    |  |
| 3       | 129418-18320 | STUD BOLT M8X20                  | 2    |  |
| 4       | 129263-13210 | BOLT, M8X100                     | 2    |  |
| 5       | 129900-13251 | GASKET                           | 1    |  |
| 6       | 119802-13680 | BOLT, M8X90                      | 6    |  |
| 7       | 119131-18320 | BOLT M 8X 22                     | 4    |  |
| 8       | 26306-080002 | NUT                              | 2    |  |
| 9       | 129930-13201 | GASKET, SILENCER                 | 1    |  |
| 10      | 129944-13520 | SILENCER                         | 1    |  |
| 11      | 129944-13660 | STAY, SILENCER                   | 1    |  |
| 12      | 22157-080000 | WASHER 8                         | 2    |  |
| 13      | 26106-080162 | BOLT M 8X 16 PLATED              | 2    |  |
| 14      | 26106-080202 | BOLT M 8X 20 PLATED              | 4    |  |
| 15      | 26306-080002 | NUT                              | 4    |  |
| 16      | 129927-13800 | PIPE (EGR CMP)                   | 1    |  |
| 17      | 129927-13810 | GASKET, EGR PIPE                 | 1    |  |
| 18      | 26106-100302 | BOLT M10X 30 PLATED              | 2    |  |
| 19      | 26306-080002 | NUT                              | 2    |  |
| 20      | 129927-13900 | EGR VALVE                        | 1    |  |
| 21      | 129927-13910 | GASKET (EGR-V IN                 | 1    |  |
| 22      | 129927-13920 | GASKET (EGR-V OUT                | 1    |  |
| 23      | 26106-100302 | BOLT M10X 30 PLATED              | 1    |  |
| 24      | 26106-100952 | BOLT M10X 95 PLATED              | 1    |  |
| 25      | 129930-13201 | GASKET, SILENCER                 | 1    |  |

Engine for TL230 4TNV98-ZNTBL  
CAMSHAFT & DRIVING GEAR



| REF NO. | PARTS NO.    | Description           | Q'ty |   | Remarks          |
|---------|--------------|-----------------------|------|---|------------------|
|         |              |                       | I    | R |                  |
| 1       | 129150-14200 | TAPPET                | 8    |   |                  |
| 2       | 129907-14400 | PUSH ROD              | 8    |   |                  |
| 3       | 129908-14590 | CAMSHAFT ASSY         | 1    |   |                  |
| 4       | 129150-02450 | · METAL, THRUST (CAM  | 1    |   |                  |
| 6       | 129900-14110 | · GEAR, CAMSHAFT      | 1    |   |                  |
| 7       | 22512-070140 | · KEY 7X 14           | 1    |   |                  |
| 8       | 26106-080162 | BOLT M 8X 16 PLATED   | 2    |   |                  |
| 9       | 123900-25060 | SHAFT (GEAR, IDLE     | 1    |   |                  |
| 10      | 129900-25110 | GEAR ASSY, IDLE       | 1    |   |                  |
| 13      | 129150-25920 | BUSH, IDLE GEAR       | 1    |   | (1) REPAIR PART. |
| 14      | 26106-080552 | BOLT M 8X 55 PLATED   | 3    |   |                  |
| 15      | 129953-25300 | BOLT                  | 4    |   |                  |
| 16      | 129907-25900 | GEAR, F. I. PUMP      | 1    |   |                  |
| 17      | 158563-51150 | FLANGE                | 1    |   |                  |
| 18      | 22217-180000 | SPRING WASHER 18      | 1    |   |                  |
| 19      | 26776-180002 | NUT M18, LOCK         | 1    |   |                  |
| 20      | 129900-26020 | GEAR ASSY, HYDR. PUMP | 1    |   |                  |

Engine for TL230 4TNV98-ZNTBL  
CRANKSHAFT & PISTON



| REF NO. | PARTS NO.    | Description                | クランクシャフト & ピストン |  | CRANKSHAFT & PISTON |     | Remarks                       |
|---------|--------------|----------------------------|-----------------|--|---------------------|-----|-------------------------------|
|         |              |                            | Q'ty            |  | I                   | R   |                               |
| 1       | 129902-21050 | CRANKSHAFT COMP            | 1               |  |                     |     |                               |
| 3       | 129900-21220 | · GEAR, CRANKSHAFT         | 1               |  |                     |     |                               |
| 4       | 121850-21290 | · PARALLEL PIN             | 1               |  |                     |     |                               |
| 5       | 121850-21920 | · PARALLEL PIN 10X22       | 1               |  |                     |     |                               |
| 6       | 22512-070140 | · KEY 7X 14                | 1               |  |                     |     |                               |
| 7       | 129916-21610 | BOLT, V-PULLEY             | 1               |  |                     |     |                               |
| 8       | 129960-21640 | WASHER                     | 1               |  |                     |     |                               |
| 9       | 129916-21680 | V-PULLEY, CRANKSHAFT       | 1               |  |                     |     |                               |
| 10      | 24341-000530 | O-RING 1A S-53.0           | 1               |  |                     |     |                               |
| 11      | 121850-21130 | BOLT, FLYWHEEL             | 6               |  |                     |     |                               |
| 12      | 129953-21570 | FLYWHEEL ASSY              | 1               |  |                     |     |                               |
| 14      | 129900-21600 | · GEAR, RING               | 1               |  |                     |     |                               |
| 15      | 129927-22080 | PISTON ASSY                | 4               |  |                     |     |                               |
| 17      | 129927-22050 | · RING SET, PISTON         | 4               |  |                     |     |                               |
| 21      | 120130-22301 | PIN, PISTON                | 4               |  |                     |     |                               |
| 22      | 22252-000300 | CIRCLIP 30                 | 8               |  |                     |     |                               |
| 23      | 129900-23001 | ROD ASSY, CONNECTING       | 4               |  |                     |     |                               |
| 26      | 129900-23200 | · BOLT, ROD                | 8               |  |                     |     |                               |
| 27      | 129900-23601 | · METAL ASSY, CRANKPIN     | 4               |  |                     |     |                               |
| 29      | 129900-23911 | BUSH, PISTON PIN           | 4               |  |                     | (1) | REPAIR PART.                  |
| 30      | 129900-23611 | BEARING, PIN U. S=0.25     | 4               |  |                     | (2) | UNDER-SIZED (U. S=0.25) PART. |
| 32      | 729927-22900 | PISTON W/RING, O. S=0.250S | 4               |  |                     | (3) | OVER-SIZED (O. S=0.25) PART.  |
| 34      | 729927-22950 | · RING SET, O. 250S        | 4               |  |                     | (3) | OVER-SIZED (O. S=0.25) PART.  |

