



# Dingo<sup>®</sup> 320-D

## Compact Utility Loader

Model No. 22303—230000001 and Up

## Parts Catalog

### Ordering Replacement Parts

To order replacement parts, please supply: the part number, the quantity, and the description of each part desired.

### Understanding Reference Numbers

Each identified part in an illustration has a reference number. The reference number for a part also appears in the parts list, along with other information about the part.

This catalog uses two special reference number formats, one to indicate parts in a service assembly and another to indicate the quantity of a given part in an illustration.

### Service Assembly Reference Numbers

Parts in service assemblies have reference numbers in the form **a:b**. The **a** represents the reference number of the entire service assembly and the **b** represents a sequential number unique to each part within the service assembly.

For example, a wheel assembly might be identified by reference number **6**, the tire by **6:1**, the valve by **6:2**, and the wheel by **6:3**. When you order the assembly identified by reference number **6**, you receive all parts identified by reference numbers **6:1**, **6:2**, and **6:3**. However, you may also order any part individually.

Reference numbers of this type appear in illustrations and in part lists.

### Reference Numbers Indicating Quantity

In an illustration, if a reference number indicates more than one part, the reference number has the form **nX y**. The **n** represents the quantity of the part, the **X** is the multiplication symbol, and the **y** represents the reference number.

For example, in an illustration, the reference number **2X 37** means that two of the parts identified by reference number **37** are indicated.

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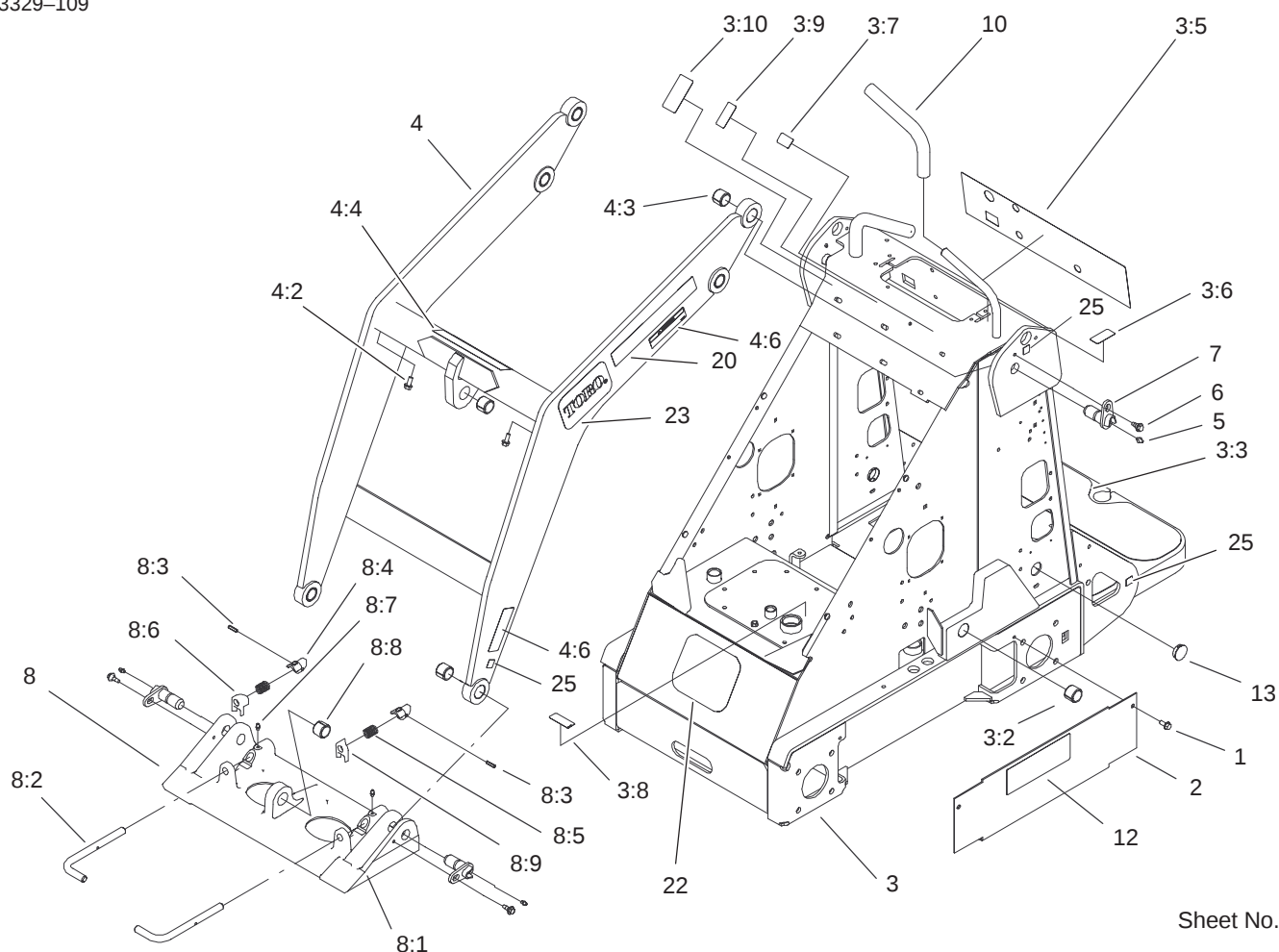
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## Part Description Abbreviations

Part descriptions in this catalog may include the following abbreviations.

| Abbreviation | Meaning                           |
|--------------|-----------------------------------|
| AR .....     | as required                       |
| ASM .....    | assembly                          |
| CARR .....   | carriage                          |
| DEG .....    | degrees                           |
| FH .....     | flat head                         |
| GA .....     | gauge                             |
| HF .....     | hex flange                        |
| HH .....     | hex head                          |
| HHF .....    | hex head flange                   |
| HLH .....    | hex lag head                      |
| HJ .....     | hex jam                           |
| HOC .....    | height-of-cut                     |
| HS .....     | hex socket                        |
| HSBH .....   | hex socket button head            |
| HSFH .....   | hex socket flat head              |
| HSH .....    | hex socket head                   |
| HWH .....    | hex washer head                   |
| HWHTF .....  | hex washer head<br>thread forming |

| Abbreviation | Meaning                 |
|--------------|-------------------------|
| HYD .....    | hydraulic               |
| INC .....    | incorporated            |
| LH .....     | left hand               |
| NI .....     | nylon insert            |
| PPH .....    | Phillips pan head       |
| PTH .....    | Phillips truss head     |
| PTO .....    | power take off          |
| RH .....     | right hand              |
| SFH .....    | slotted fillister head  |
| SHH .....    | slotted hex head        |
| SQH .....    | square head             |
| SHWH .....   | slotted hex washer head |
| SPH .....    | slotted pan head        |
| SRH .....    | slotted round head      |
| STD .....    | standard                |
| TAP .....    | self tapping            |
| TTH .....    | Torx truss head         |
| WH .....     | wing head               |

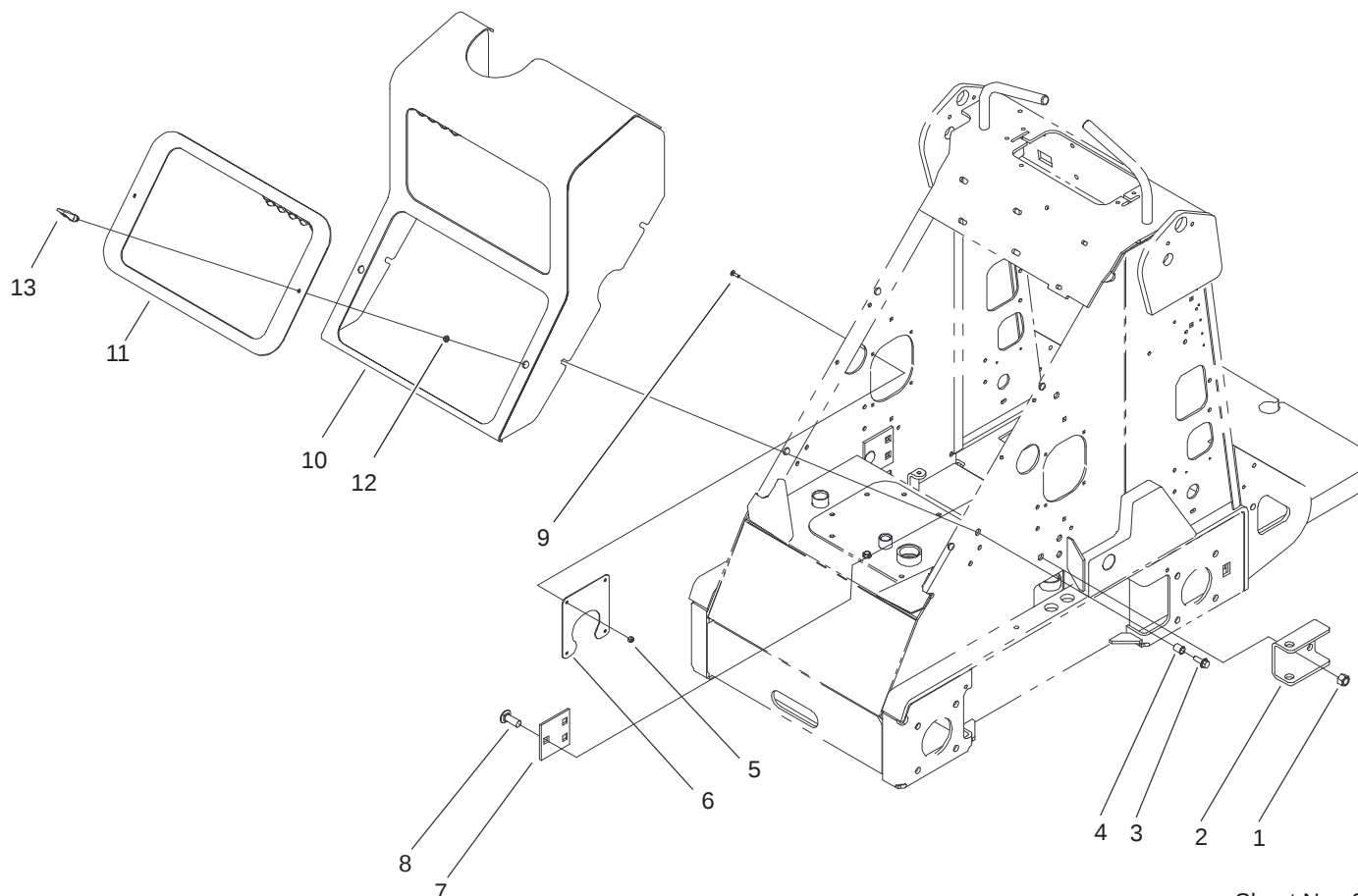


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## Frame and Loader Arm Assembly

| Ref. No. | Part No.    | Qty. | Description            |
|----------|-------------|------|------------------------|
| 1        | 32144-70    | 6    | Screw-HH               |
| 2        | 99-3020-01  | 2    | Cover-Hose             |
| 3        | 105-8375    | 1    | Frame ASM              |
| 3:2      | 98-4871     | 2    | Bushing-Tension        |
| 3:3      | 98-9947     | 2    | Tread-Foot             |
| 3:5      | 99-3157     | 1    | Decal-Panel, Control   |
| 3:6      | 98-8219     | 1    | Decal-Throttle         |
| 3:7      | 98-8220     | 1    | Decal-Limiter, Speed   |
| 3:8      | 105-8432    | 1    | Decal-Oil, Hydraulic   |
| 3:9      | 98-8235     | 1    | Decal-Selector         |
| 3:10     | 98-4677     | 1    | Decal-Power, Auxiliary |
| 4        | 105-8366    | 1    | Loader ASM             |
| 4:2      | 32144-70    | 2    | Screw-HH               |
| 4:3      | 98-4871     | 7    | Bushing-Tension        |
| 4:4      | 98-4682     | 1    | Decal-Caution          |
| 4:6      | 100-6141    | 4    | Decal-Pinch            |
| 5        | 302-5       | 4    | Fitting-Grease         |
| 6        | 99-5105     | 4    | Bolt-Shoulder          |
| 7        | 99-1414     | 4    | Pin-Pivot              |
| 8        | 105-8364    | 1    | Quick Attach ASM       |
| 8:1      | 105-0245-03 | 1    | Mount-Attach, Quick    |
| 8:2      | 105-8367    | 2    | Pin-Locking            |
| 8:3      | 3285-1      | 2    | Pin-Grooved            |
| 8:4      | 105-0246    | 2    | Cam                    |
| 8:5      | 98-4694     | 2    | Spring-Compression     |

| Ref. No. | Part No. | Qty. | Description       |
|----------|----------|------|-------------------|
| 8:6      | 104-5909 | 1    | Stop-RH           |
| 8:7      | 302-5    | 2    | Fitting-Grease    |
| 8:8      | 98-4871  | 1    | Bushing-Tension   |
| 8:9      | 104-5903 | 1    | Stop-LH           |
| 10       | 98-4845  | 2    | Grip-Cushion      |
| 12       | 105-8429 | 2    | Decal-4 Paw       |
| 13       | 94-1402  | 2    | Plug-Hole         |
| 20       | 105-8428 | 2    | Decal-Dingo 320d  |
| 22       | 62-5550  | 1    | Decal             |
| 23       | 93-7340  | 2    | Decal-Toro        |
| 25       | 93-9084  | 6    | Decal-Point, Lift |

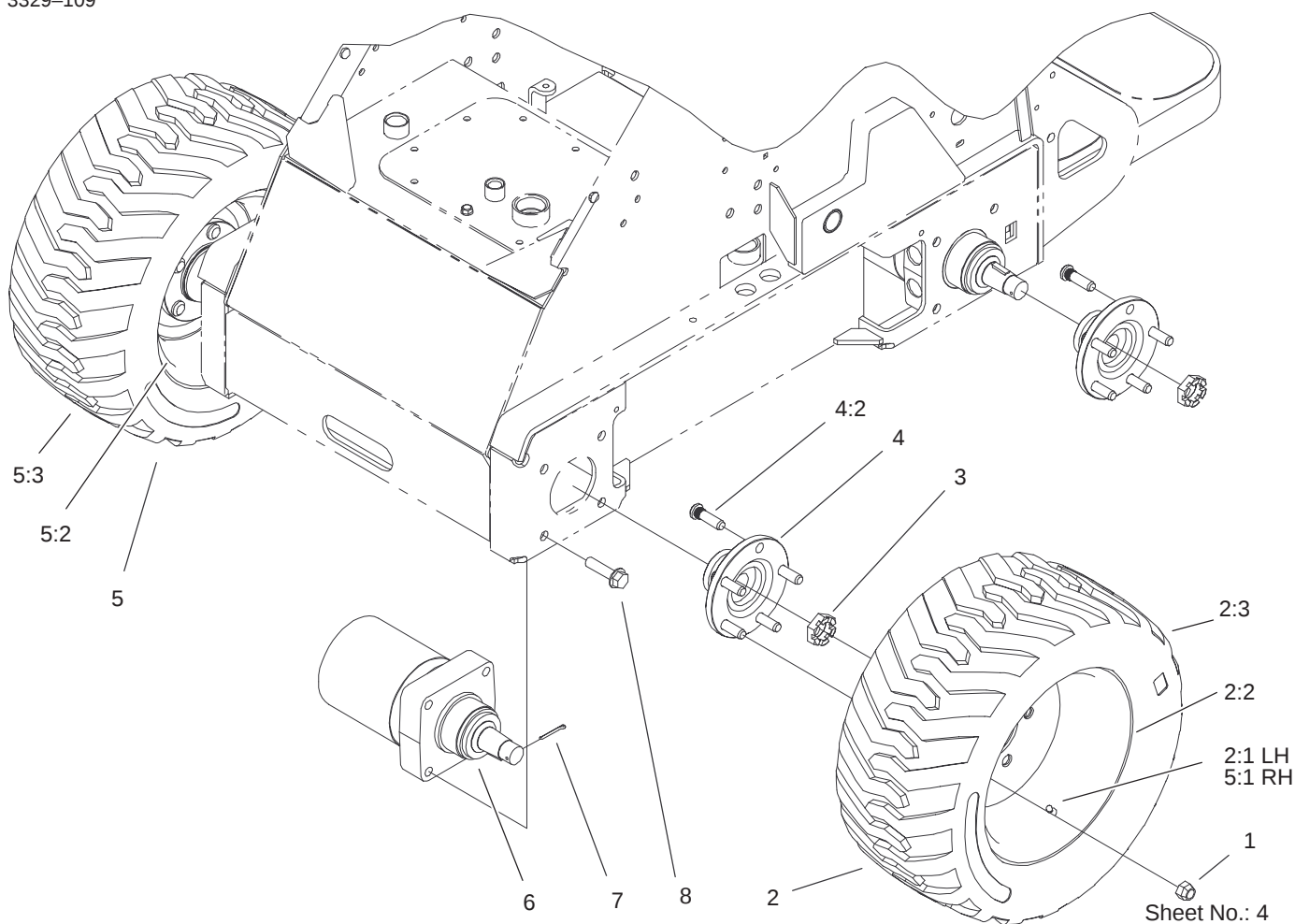


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## Hood and Screen Assembly

| Ref. No. | Part No.    | Qty. | Description     |
|----------|-------------|------|-----------------|
| 1        | 3296-23     | 6    | Nut-Lock, NI    |
| 2        | 100-4122-01 | 2    | Bracket-Anchor  |
| 3        | 3234-29     | 4    | Screw-HHF       |
| 4        | 32148-8     | 4    | Insert-Threaded |
| 5        | 3296-2      | 4    | Nut-Lock        |
| 6        | 99-1427-03  | 1    | Guard-Muffler   |
| 7        | 100-4116-01 | 2    | Plate-Anchor    |
| 8        | 3233-26     | 6    | Screw-CARR      |
| 9        | 3229-34     | 4    | Bolt-CARR       |
| 10       | 99-3120-03  | 1    | Hood ASM        |
| 11       | 99-3118-03  | 1    | Cover ASM       |
| 12       | 99-3058     | 2    | Washer          |
| 13       | 74-5950     | 2    | Latch-Swell     |

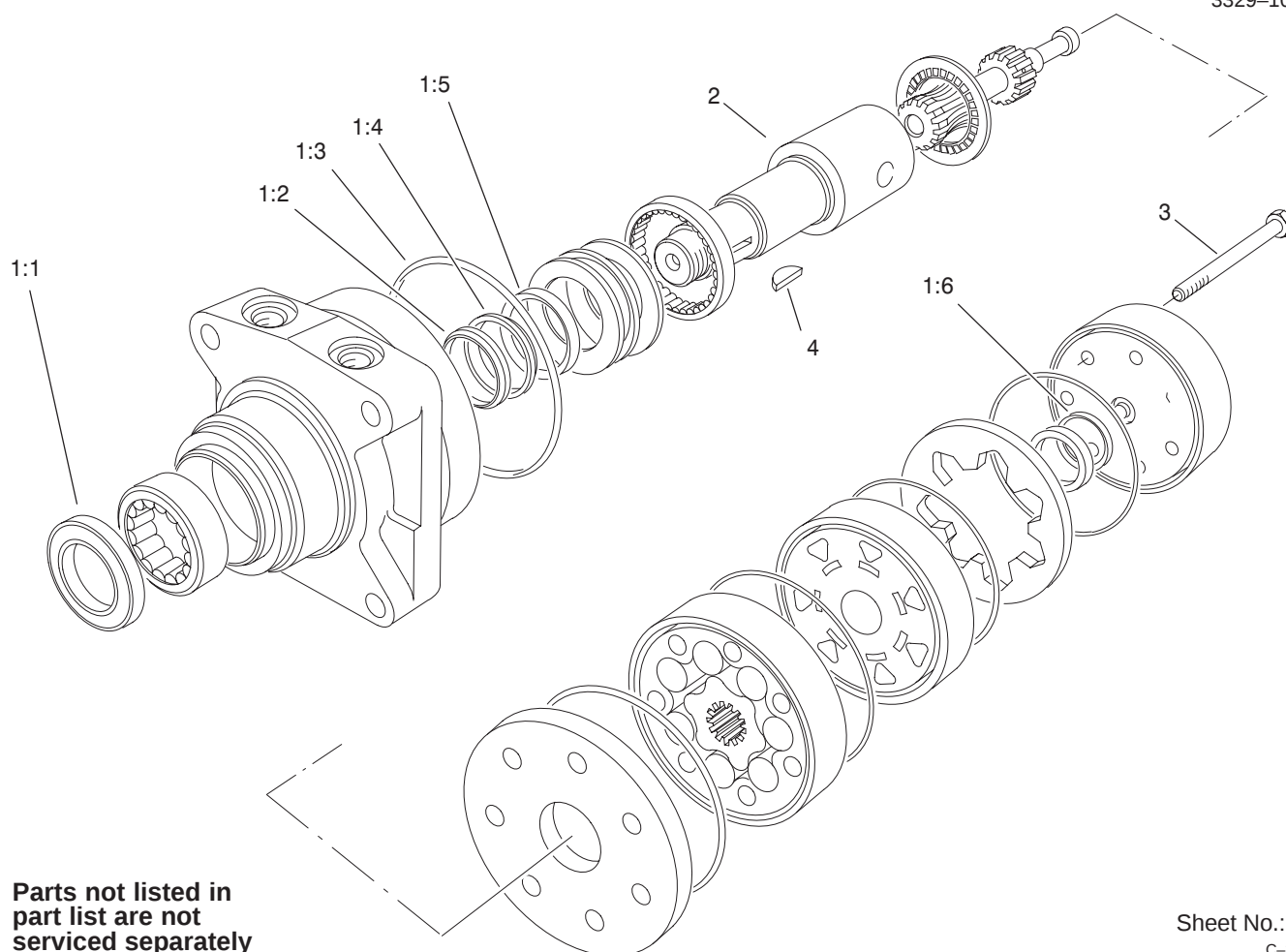
| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



## Wheel and Motor Assembly

| Ref. No. | Part No. | Qty. | Description              |
|----------|----------|------|--------------------------|
| 1        | 242-50   | 20   | Nut-Lug                  |
| 2        | 98-2747  | 2    | LH Wheel And Tire<br>ASM |
| 2:1      | 232-27   | 1    | Stem-Valve               |
| 2:2      | 98-2748  | 1    | Wheel                    |
| 2:3      | 98-2749  | 1    | Tire-Loader Style        |
| 3        | 99-3139  | 4    | Nut                      |
| 4        | 99-3064  | 4    | Hub ASM                  |
| 4:2      | 10-6830  | 5    | Stud-Type, Drive         |
| 5        | 99-1447  | 2    | RH Wheel And Tire<br>ASM |
| 5:1      | 232-27   | 1    | Stem-Valve               |
| 5:2      | 98-2748  | 1    | Wheel                    |
| 5:3      | 98-2749  | 1    | Tire-Loader Style        |
| 6        | 99-3052  | 4    | Hydraulic Motor ASM      |
| 7        | 99-3171  | 4    | Pin-Cotter               |
| 8        | 3234-27  | 16   | Screw-Flange             |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



**Parts not listed in  
part list are not  
serviced separately**

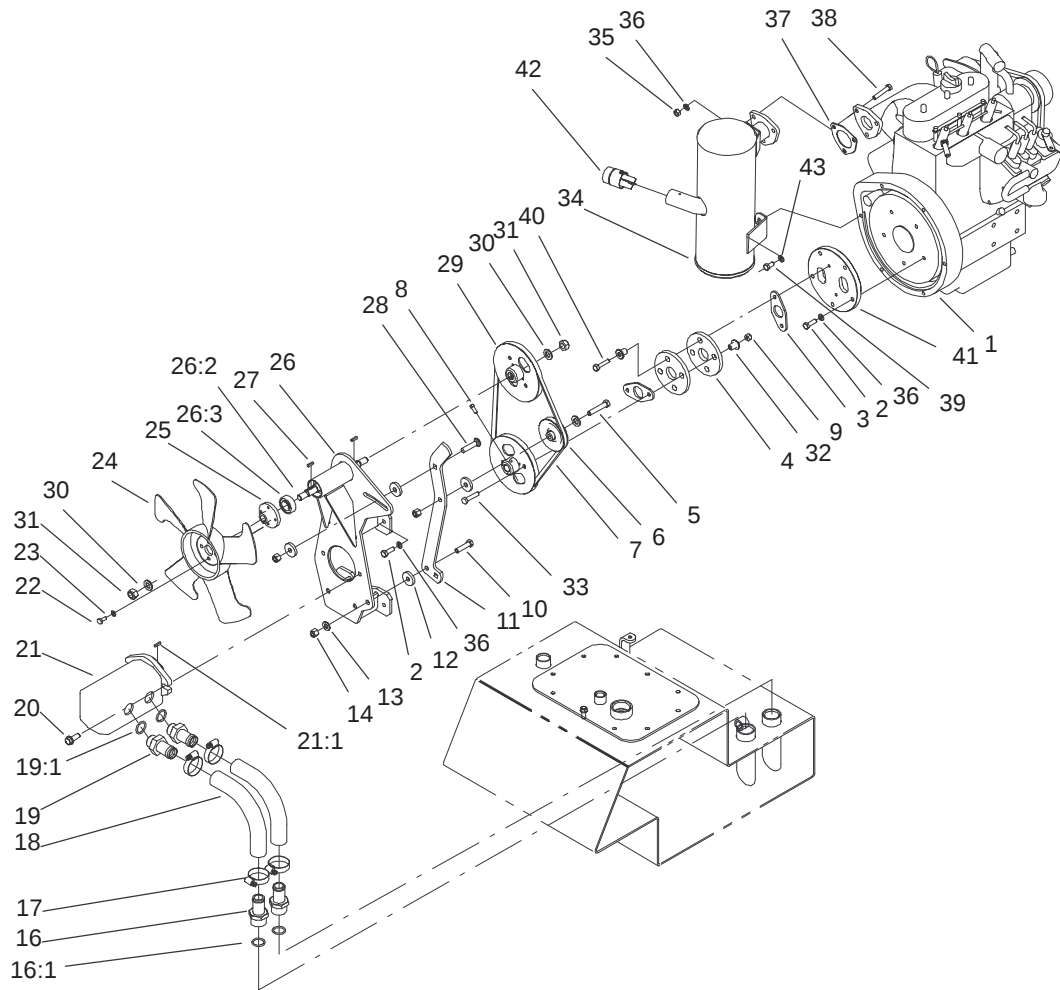
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# Hydraulic Motor Assembly No. 99-3052

| Ref. No. | Part No. | Qty. | Description         |
|----------|----------|------|---------------------|
| 1        | 94-8178  | 1    | Seal Kit            |
| ☆1:1     |          | 1    | Seal-Dirt And Water |
| ☆1:2     |          | 1    | Washer-Backup       |
| ☆1:3     |          | 5    | Seal-Ring           |
| ☆1:4     |          | 1    | Washer-Backup       |
| ☆1:5     |          | 1    | Seal-Inner          |
| ☆1:6     |          | 1    | Seal-Commutator     |
| 2        | 99-3090  | 1    | Coupling-Shaft      |
| 3        | 99-3091  | 7    | Screw-Cap, HH       |
| 4        | 3257-42  | 1    | Key-Woodruff        |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

☆ Not serviced separately



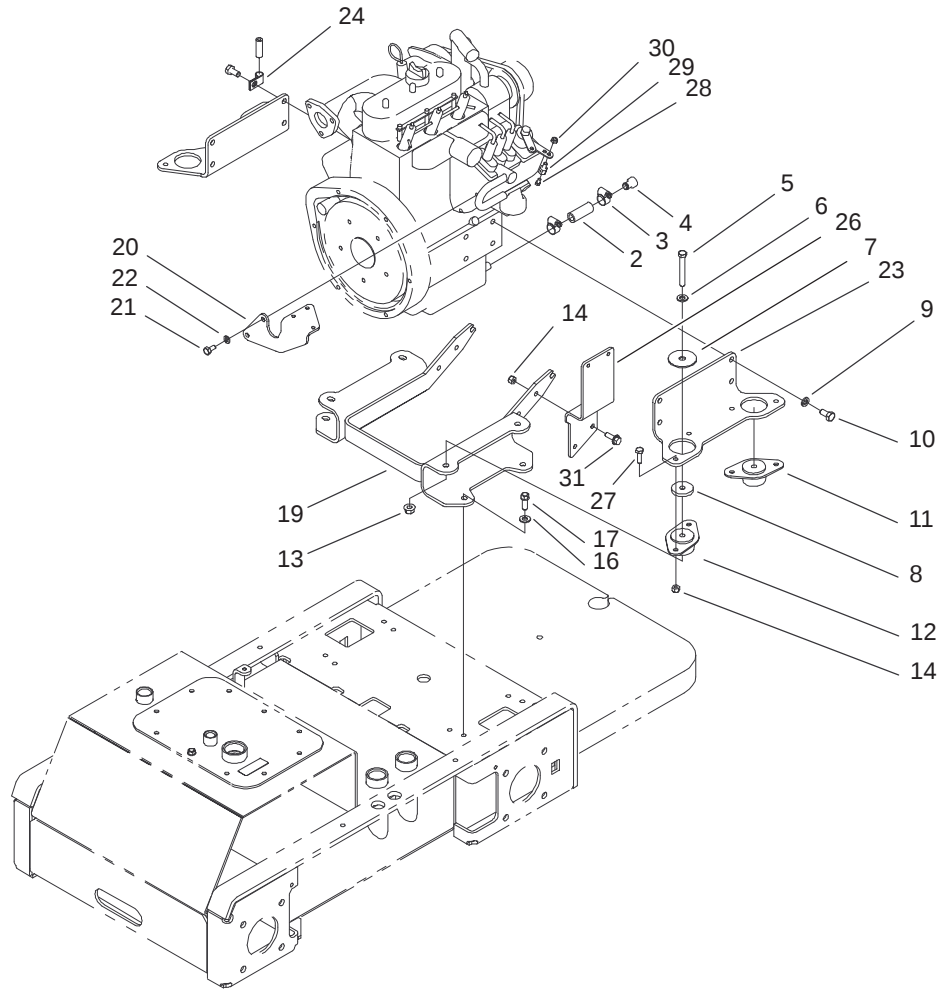
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## Engine Assembly

| Ref. No. | Part No.    | Qty. | Description           |
|----------|-------------|------|-----------------------|
| 1        | 98-4661     | 1    | Engine-Kubota, D722-E |
| 2        | 99-5131     | 9    | Bolt                  |
| 3        | 99-1430     | 2    | Spacer-Coupler        |
| 4        | 44-2230     | 2    | Coupling-Rubber       |
| 5        | 323-10      | 1    | Screw-HH              |
| 6        | 63-8140     | 1    | Pulley-Idler          |
| 7        | 92-8876     | 1    | V-Belt                |
| 8        | 3241-5      | 2    | Screw-Set             |
| 9        | 104-9469    | 2    | Nut-Lock              |
| 10       | 323-8       | 1    | Screw-HH              |
| 11       | 100-1727-01 | 1    | Mount-Tensioner       |
| 12       | 99-5121     | 4    | Spacer                |
| 13       | 3256-24     | 2    | Washer-Flat           |
| 14       | 3296-39     | 3    | Nut-Lock, NI          |
| 16       | 354-78      | 2    | Connector-Hose        |
| 16:1     | 237-146     | 1    | O-Ring                |
| 17       | 2412-111    | 4    | Clamp                 |
| 18       | 99-3046     | 2    | Hose-Suction, Formed  |
| 19       | 99-3017     | 2    | Fitting               |
| 19:1     | 237-81      | 1    | O-Ring                |
| 20       | 66-9300     | 2    | Screw-HF              |
| 21       | 98-4702     | 1    | Pump-Gear, Tandem     |
| 21:1     | 98-4700     | 1    | Key-Square            |
| *21:2    | 99-1353     | 1    | Kit-Seal              |

| Ref. No. | Part No. | Qty. | Description            |
|----------|----------|------|------------------------|
| 22       | 321-2    | 4    | Screw-HH               |
| 23       | 3253-3   | 4    | Washer-Lock            |
| 24       | 43-1911  | 1    | Fan                    |
| 25       | 105-8383 | 1    | Adapter-Fan            |
| 26       | 99-1449  | 1    | Pump Mount ASM         |
| 26:2     | 98-0068  | 1    | Shaft-Fan              |
| 26:3     | 38-7820  | 2    | Bearing-Ball           |
| 27       | 100-1715 | 2    | Key-Square             |
| 28       | 3231-5   | 1    | Screw-CARR             |
| 29       | 99-5111  | 2    | Pulley-Keyed           |
| 30       | 33096-00 | 2    | Washer-Flat            |
| 31       | 98-8089  | 2    | Nut-Lock               |
| 32       | 71-4411  | 4    | Spacer                 |
| 33       | 5-1470   | 2    | Capscrew               |
| 34       | 105-8390 | 1    | Muffler-Diesel         |
| 35       | 3217-6   | 3    | Nut-Hex                |
| 36       | 3253-4   | 12   | Washer-Lock            |
| 37       | 100-2238 | 1    | Gasket-Muffler         |
| 38       | 322-9    | 3    | Screw-HH               |
| 39       | 99-5132  | 1    | Bolt                   |
| 40       | 99-5133  | 2    | Bolt                   |
| 41       | 99-1431  | 1    | Adapter-Flywheel       |
| 42       | 75-6880  | 1    | Screen-Arrester, Spark |
| 43       | 88-7200  | 1    | Washer-Flat            |

\* Not illustrated

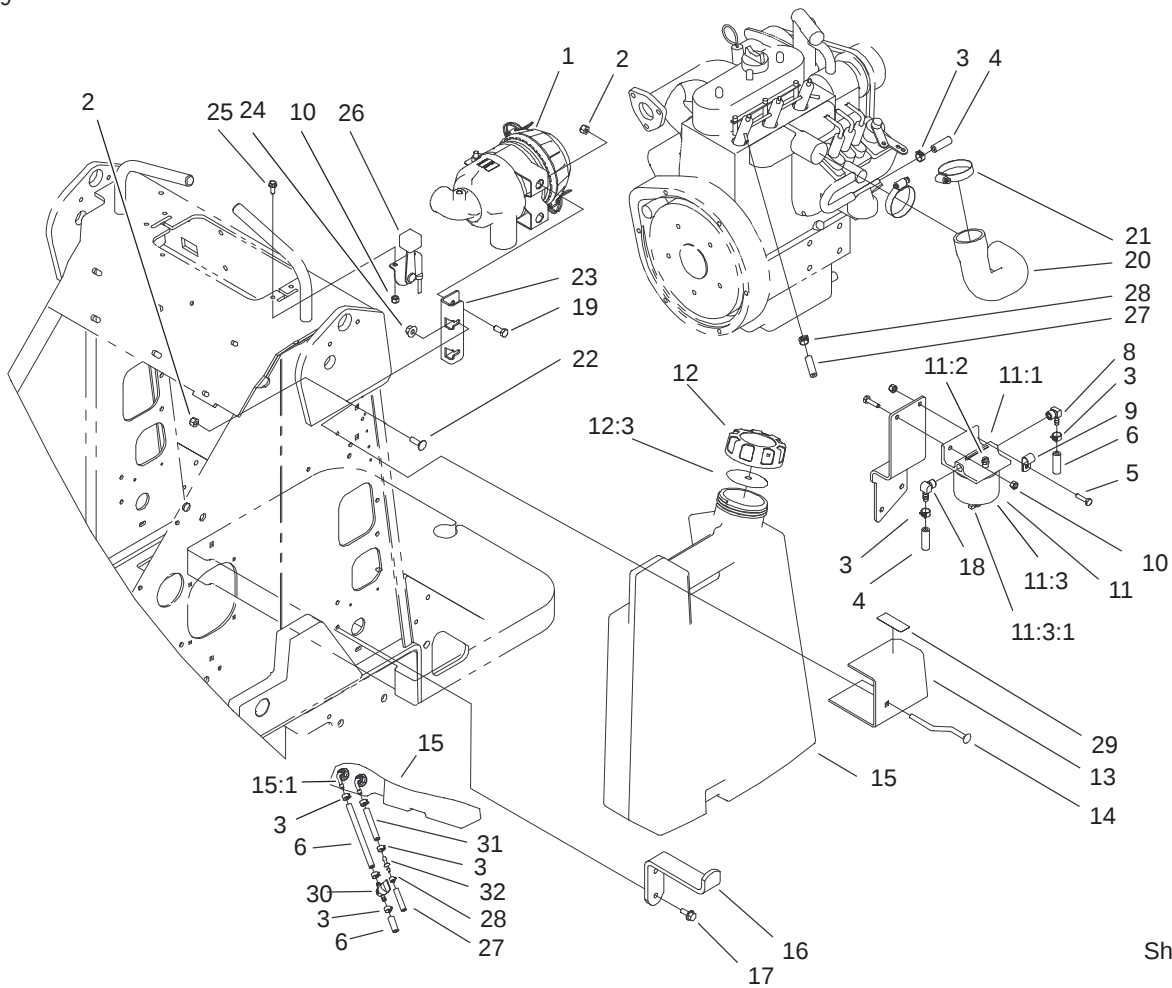


Sheet No.: 6

## Engine Mount Assembly

| Ref. No. | Part No.    | Qty. | Description           |
|----------|-------------|------|-----------------------|
| 2        | 56-2230     | 1    | Hose-Fuel             |
| 3        | 2412-36     | 2    | Clamp-Hose            |
| 4        | 99-1445     | 1    | Plug-Oil              |
| 5        | 323-13      | 4    | Screw-HH              |
| 6        | 3256-24     | 4    | Washer-Flat           |
| 7        | 87-5100     | 4    | Washer-Snubbing       |
| 8        | 98-4596     | 4    | Washer-Mount, Engine  |
| 9        | 42-9600     | 6    | Lockwasher-Spring     |
| 10       | 99-5130     | 8    | Bolt                  |
| 11       | 83-1030     | 2    | Mount-Engine          |
| 12       | 93-5265     | 2    | Mount-Engine          |
| 13       | 32128-29    | 4    | Locknut-Flange        |
| 14       | 3296-29     | 10   | Nut-Lock, NI          |
| 16       | 3256-80     | 4    | Washer-Flat           |
| 17       | 95-1726     | 4    | Screw-Taptite W/Patch |
| 19       | 98-0066-01  | 1    | Mount-Engine          |
| 20       | 105-4054-01 | 1    | Mount-Solenoid        |
| 21       | 99-5132     | 2    | Bolt                  |
| 22       | 3253-4      | 2    | Washer-Lock           |
| 23       | 98-0055-01  | 2    | Plate-Mount, Engine   |
| 24       | 2412-138    | 1    | R-Clamp               |
| 26       | 98-0059-01  | 1    | Mount-Filter, Fuel    |
| 27       | 322-5       | 8    | Screw-HH              |
| 28       | 25-8640     | 1    | Screw-HH              |

| Ref. No. | Part No. | Qty. | Description            |
|----------|----------|------|------------------------|
| 29       | 93-0021  | 1    | Swivel-Cable, Throttle |
| 30       | 3296-13  | 1    | Nut-Lock NI            |
| 31       | 3234-29  | 2    | Screw-HHF              |

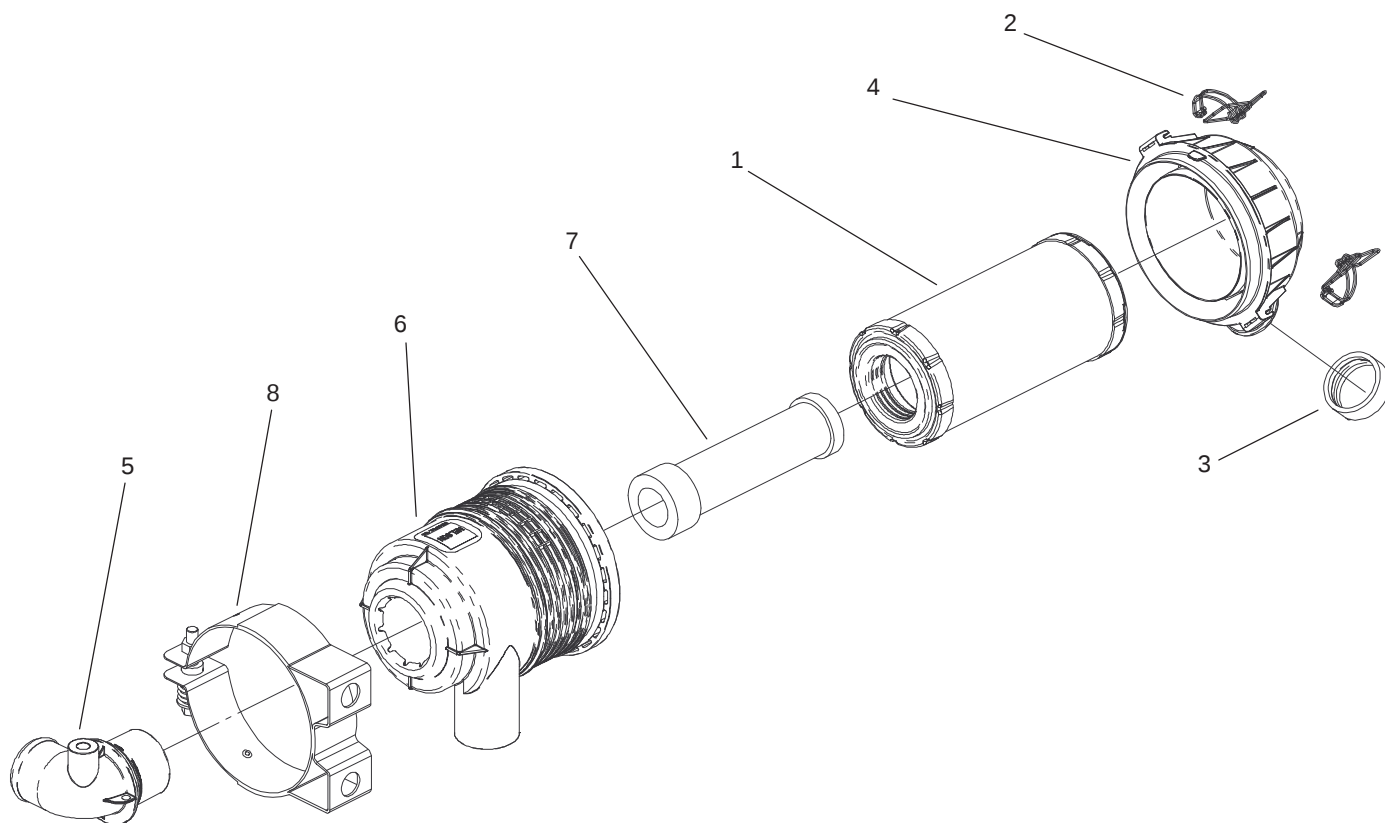


Sheet No.: 7

## Fuel Tank and Air Filter Assembly

| Ref. No. | Part No.   | Qty. | Description              |
|----------|------------|------|--------------------------|
| 1        | 99-3160    | 1    | Air Cleaner ASM          |
| 2        | 3296-29    | 3    | Nut-Lock, NI             |
| 3        | 92-2379    | 8    | Clamp-Hose               |
| 4        | 63-7627    | 1    | Hose-Fuel                |
| 5        | 321-6      | 2    | Screw-HH                 |
| 6        | 47-2980    | 2    | Hose-Fuel                |
| 8        | 304-96     | 1    | Elbow                    |
| 9        | 2412-73    | 1    | Clamp-R                  |
| 10       | 3296-42    | 4    | Nut-Lock, NI             |
| 11       | 63-7650    | 1    | Separator-Filter/Water   |
| 11:1     | 63-8280    | 1    | Head ASM                 |
| 11:2     | 63-8290    | 1    | Vent-Air                 |
| 11:3     | 63-8300    | 1    | Element-Spin-On          |
| 11:3:1   | 63-8310    | 1    | Valve-Drain              |
| 12       | 104-7419   | 1    | Cap-Fuel, Diesel         |
| 12:3     | 104-7420   | 1    | Gasket-Vented            |
| 13       | 99-1444-03 | 1    | Plate-Mount, Left        |
| 14       | 98-4657    | 1    | Bolt-Mount               |
| 15       | 105-8438   | 1    | Fuel Tank ASM, Diesel LH |
| 15:1     | 103-2615   | 2    | Fitting-Fuel, Bulkhead   |
| 16       | 98-4656-03 | 1    | Mount-Bottom, Tank       |
| 17       | 32144-70   | 2    | Screw-HH                 |
| 18       | 353-781    | 1    | Fitting-Elbow            |
| 19       | 322-3      | 2    | Screw-HH                 |
| 20       | 99-5041    | 1    | Hose-Cleaner, Air        |

| Ref. No. | Part No.   | Qty. | Description        |
|----------|------------|------|--------------------|
| 21       | 2412-92    | 2    | Clamp-Hose         |
| 22       | 3230-2     | 2    | Bolt-CARR          |
| 23       | 99-3080-03 | 1    | Mount-Cleaner, Air |
| 24       | 32128-20   | 2    | Nut-HF             |
| 25       | 3234-33    | 2    | Screw-HHF          |
| 26       | 99-1422    | 1    | Control-Throttle   |
| 27       | 99-3498    | 1    | Return-Line, Fuel  |
| 28       | 2412-80    | 2    | Clamp-Line, Fuel   |
| 29       | 93-6680    | 1    | Decal-Diesel       |
| 30       | 1-603770   | 1    | Valve-Fuel         |
| 31       | 99-5101    | 1    | Hose-Fuel          |
| 32       | 106-8150   | 1    | Fitting-Straight   |



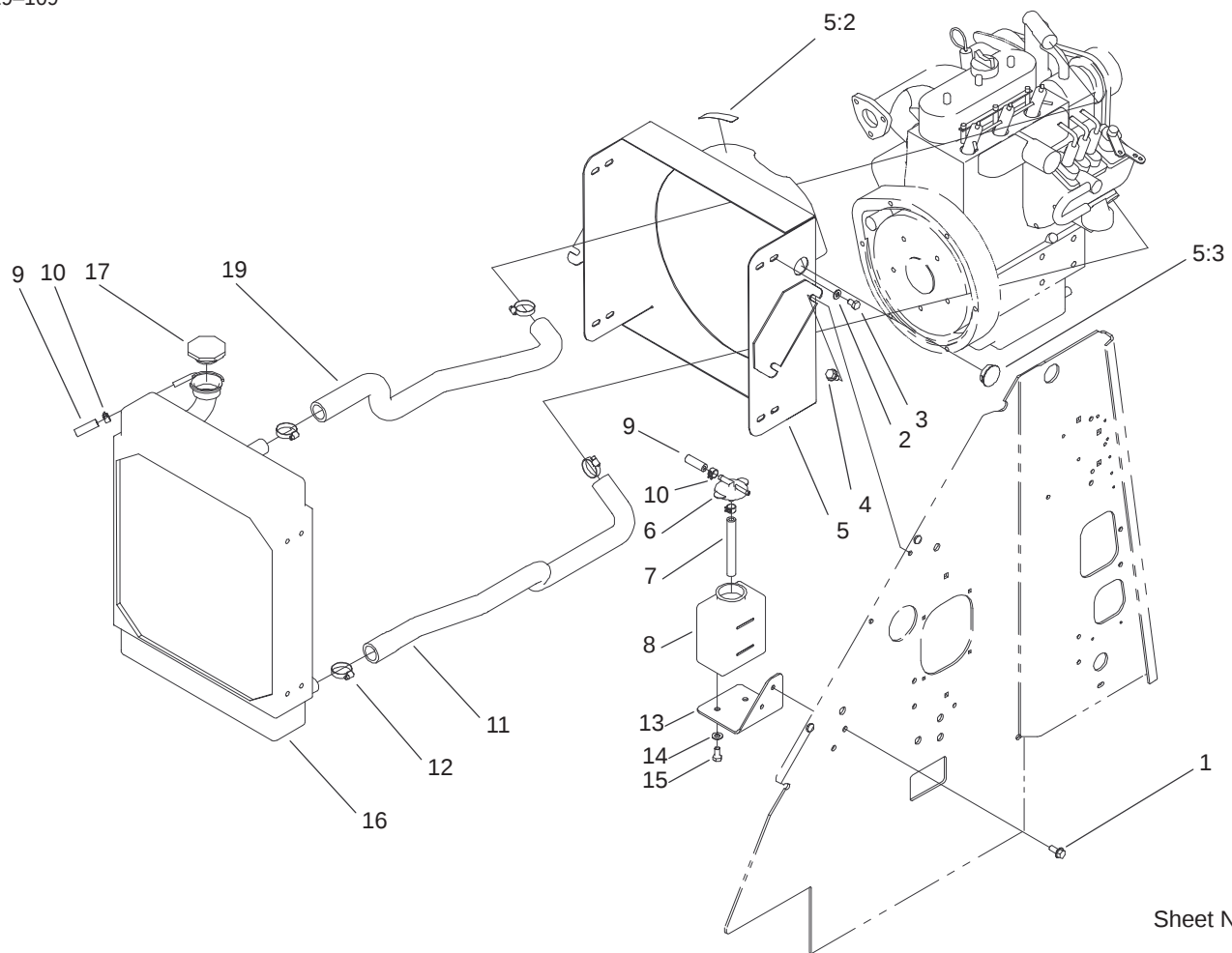
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# Air Cleaner Assembly No. 99-3160

| Ref. No. | Part No. | Qty. | Description          |
|----------|----------|------|----------------------|
| 1        | 99-3173  | 1    | Element-Filter, Air  |
| 2        | 99-3174  | 2    | Clip-Cleaner, Air    |
| 3        | 99-3175  | 1    | Valve-Ejector, Dust  |
| 4        | 99-3176  | 1    | Cover                |
| 5        | 99-3183  | 1    | Tube ASM             |
| 6        | 99-3184  | 1    | Housing              |
| 7        | 99-3198  | 1    | Filter-Safety        |
| 8        | 99-3197  | 1    | Mounting Bracket ASM |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

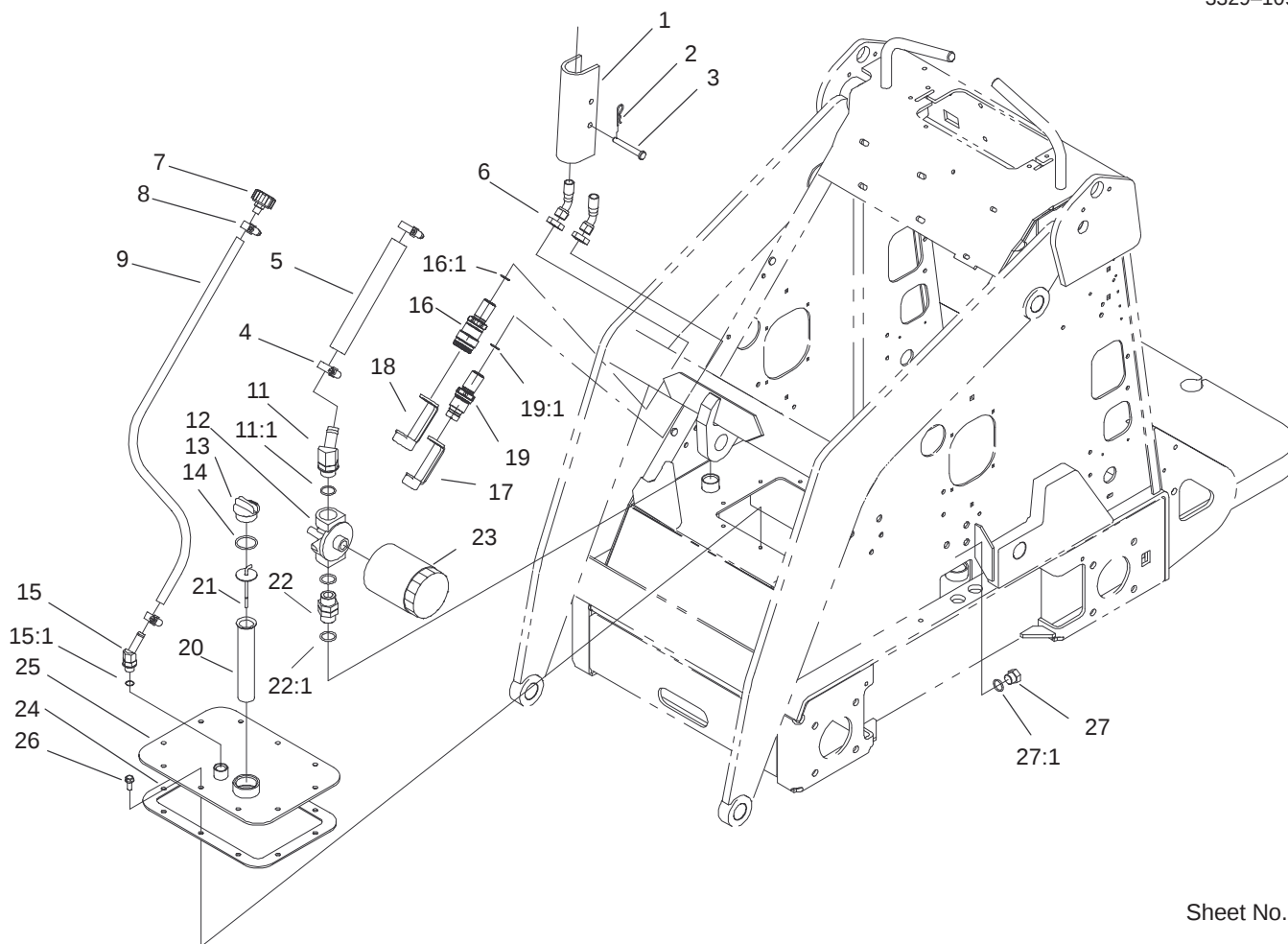


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## Radiator Mount Assembly

| Ref. No. | Part No.   | Qty. | Description          |
|----------|------------|------|----------------------|
| 1        | 32144-70   | 6    | Screw-HH             |
| 2        | 3256-82    | 8    | Washer-Flat          |
| 3        | 322-1      | 8    | Screw-HH             |
| 5        | 104-4648   | 1    | Mount-Radiator       |
| 5:2      | 93-6681    | 1    | Decal-Warning, Fan   |
| 5:3      | 94-1402    | 1    | Plug-Hole            |
| 6        | 93-2048    | 1    | Cap-Tank, Overflow   |
| 7        | 94-1348    | 1    | Hose-Fuel            |
| 8        | 93-2049    | 1    | Tank-Overflow        |
| 9        | 71-3383    | 1    | Hose-Fuel            |
| 10       | 92-2379    | 3    | Clamp-Hose           |
| 11       | 99-5042    | 1    | Hose-Radiator, Lower |
| 12       | 2412-34    | 4    | Clamp-Hose           |
| 13       | 99-1446-01 | 1    | Mount-Tank, Overflow |
| 14       | 3256-23    | 2    | Washer-Flat          |
| 15       | 99-5132    | 2    | Bolt                 |
| 16       | 99-5125    | 1    | Radiator ASM         |
| 17       | 66-3240    | 1    | Cap-Radiator         |
| 19       | 99-5043    | 1    | Hose-Radiator, Upper |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

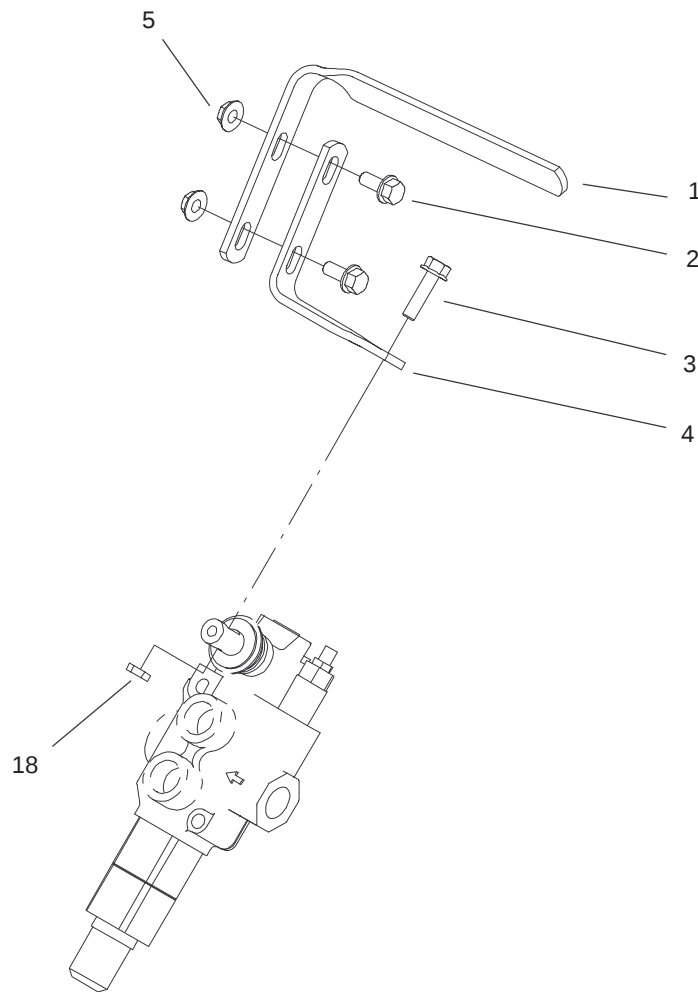


Sheet No.: 9

## Hydraulic Tank and Filter Assembly

| Ref. No. | Part No.   | Qty. | Description          | Ref. No. | Part No.    | Qty. | Description              |
|----------|------------|------|----------------------|----------|-------------|------|--------------------------|
| 1        | 98-4675-01 | 2    | Lock-Cylinder        | 21       | 100-2097    | 1    | Dipstick-Oil             |
| 2        | 3290-467   | 2    | Pin-Hair             | 22       | 98-9906     | 1    | Fitting-Thread, Straight |
| 3        | 283-52     | 2    | Pin-Clevis           | 22:1     | 237-81      | 2    | O-Ring                   |
| 4        | 2412-129   | 2    | Clamp-Hose           | 23       | 54-0110     | 1    | Filter-Oil, Transmission |
| 5        | 98-2713    | 1    | Hose-Suction, HYD    | 24       | 98-9927     | 1    | Gasket-Cover             |
| 6        | 340-74     | 2    | Locknut-Bulkhead     | 25       | 100-1713-01 | 1    | Cover ASM                |
| 7        | 68-6150    | 1    | Breather             | 26       | 98-9940     | 10   | Screw                    |
| 8        | 2412-36    | 2    | Clamp-Hose           | 27       | 353-988     | 1    | Plug-Hex, Hollow         |
| 9        | 100-1748   | 1    | Hose-Vent            | 27:1     | 237-79      | 1    | O-Ring                   |
| 11       | 354-127    | 1    | Elbow-45°            |          |             |      |                          |
| 11:1     | 237-81     | 1    | O-Ring               |          |             |      |                          |
| 12       | 92-5821    | 1    | Filter Head ASM      |          |             |      |                          |
| 13       | 93-7498    | 1    | Plug-Plastic         |          |             |      |                          |
| 14       | 237-123    | 1    | O-Ring               |          |             |      |                          |
| 15       | 354-126    | 1    | Fitting-HYD, 45°     |          |             |      |                          |
| 15:1     | 237-79     | 1    | O-Ring               |          |             |      |                          |
| 16       | 105-8394   | 1    | Bulkhead Coupler ASM |          |             |      |                          |
| 16:1     | 237-65     | 1    | O-Ring               |          |             |      |                          |
| *16:2    | 105-8396   | 1    | Seal Kit             |          |             |      |                          |
| 17       | 100-8815   | 1    | Cap-Dust, Nipple     |          |             |      |                          |
| 18       | 100-8816   | 1    | Cap-Dust, Coupler    |          |             |      |                          |
| 19       | 105-8395   | 1    | Bulkhead Nipple ASM  |          |             |      |                          |
| 19:1     | 237-65     | 1    | O-Ring               |          |             |      |                          |
| *19:2    | 100-6120   | 1    | Seal Kit             |          |             |      |                          |
| 20       | 61-2790    | 1    | Filter-Screen        |          |             |      |                          |

\* Not illustrated

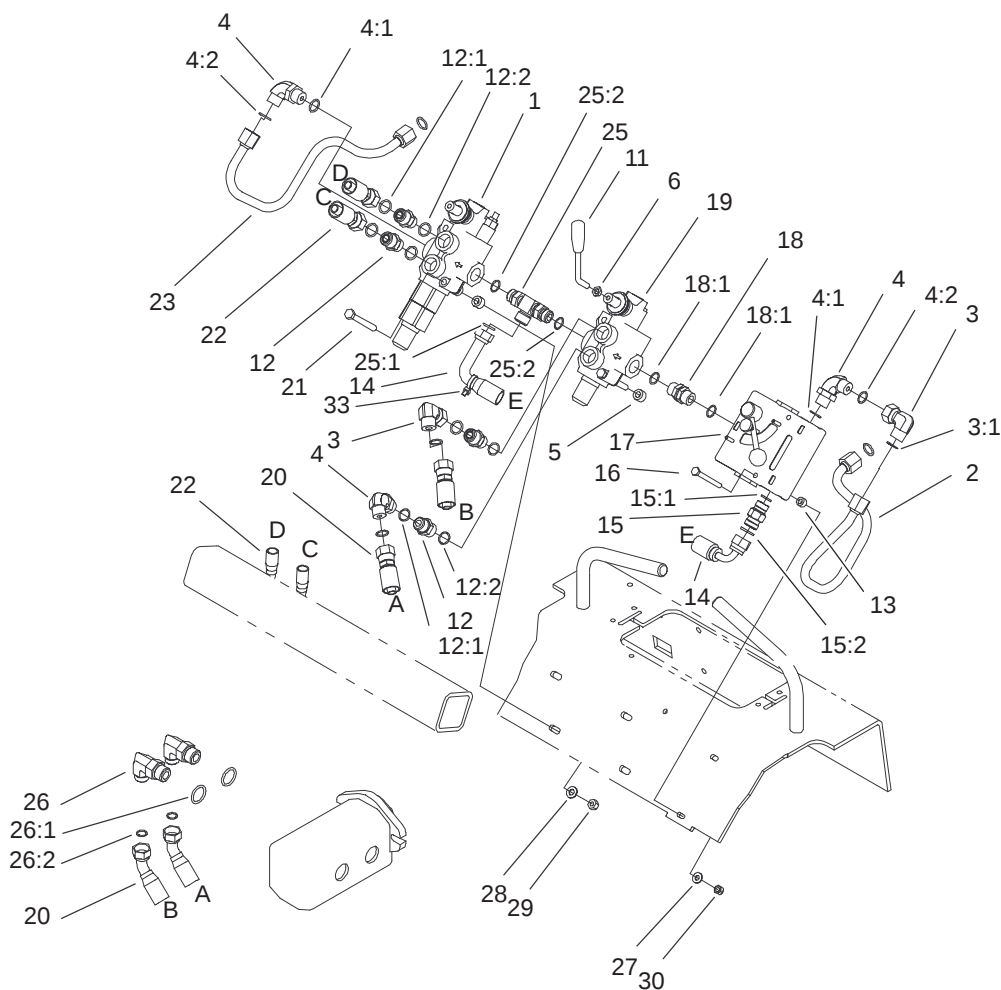


Sheet No.: 10

## Auxiliary Control Lever Assembly

| Ref. No. | Part No.  | Qty. | Description   |
|----------|-----------|------|---------------|
| 1        | 98-9090   | 1    | Grip-Control  |
| 2        | 3234-5    | 2    | Screw         |
| 3        | 33104-030 | 1    | Screw-HHF     |
| 4        | 99-1376   | 1    | Mount-Control |
| 5        | 32128-44  | 2    | Nut           |
| 18       | 42-9580   | 1    | Nut-Hex       |

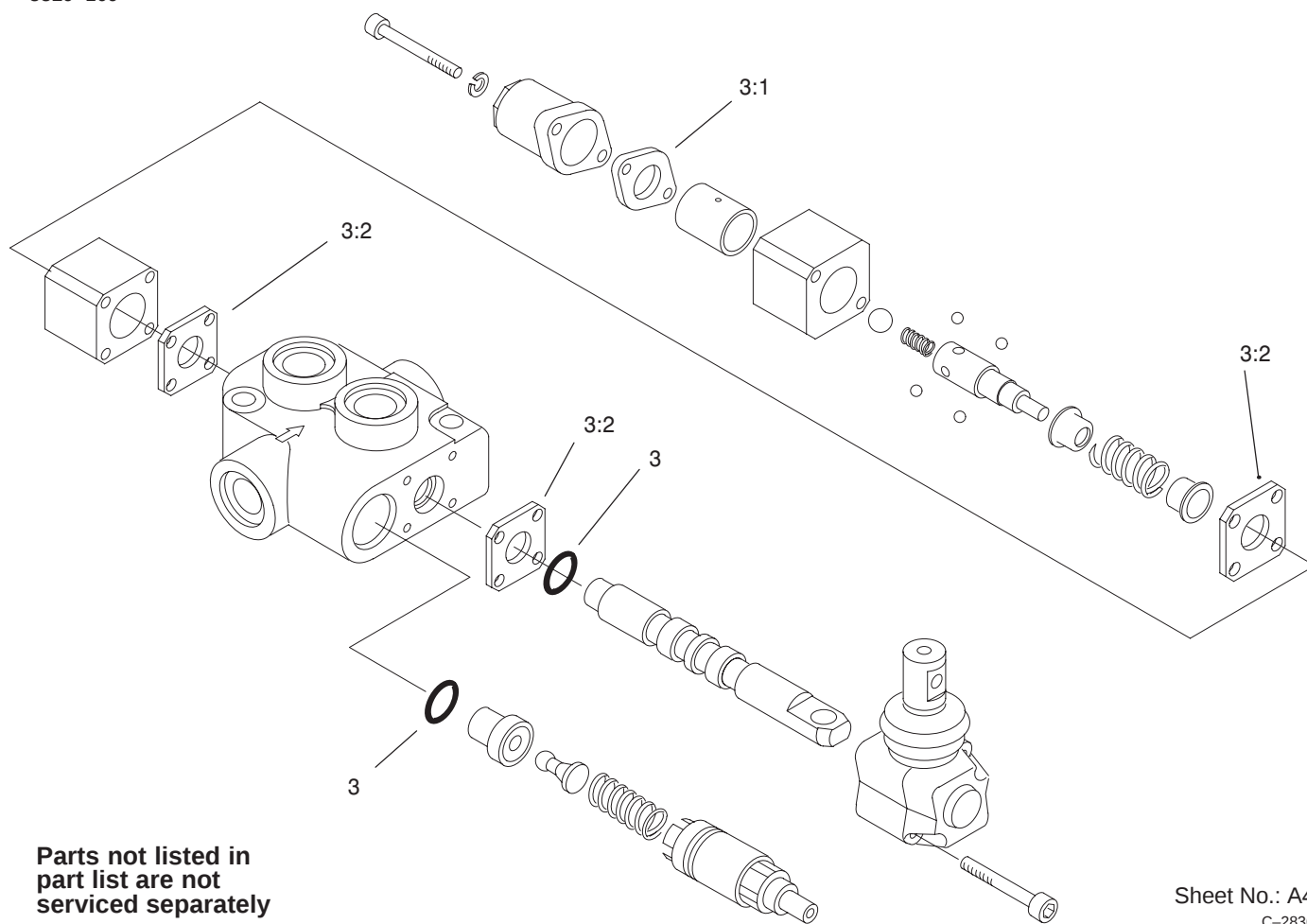
| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



Sheet No.: 11

## Hydraulic Valve Assembly

| Ref. No. | Part No. | Qty. | Description              | Ref. No. | Part No. | Qty. | Description             |
|----------|----------|------|--------------------------|----------|----------|------|-------------------------|
| 1        | 99-3077  | 1    | Valve-HYD, Auxiliary     | 22       | 100-8817 | 2    | HYD Hose ASM            |
| 2        | 99-3030  | 1    | HYD Tube ASM             | 23       | 98-4724  | 1    | HYD Tube ASM            |
| 3        | 94-6031  | 2    | Fitting-HYD              | 25       | 98-9079  | 1    | Adapter-Tee, Adjustable |
| 3:1      | 237-30   | 1    | O-Ring                   | 25:1     | 237-30   | 1    | O-Ring                  |
| 4        | 340-98   | 3    | Fitting-HYD, 90°         | 25:2     | 237-79   | 2    | O-Ring                  |
| 4:1      | 237-79   | 1    | O-Ring                   | 26       | 340-105  | 2    | Fitting-HYD, 90°        |
| 4:2      | 237-30   | 1    | O-Ring                   | 26:1     | 237-80   | 1    | O-Ring                  |
| 5        | 98-4695  | 4    | Spacer                   | 26:2     | 237-30   | 1    | O-Ring                  |
| 6        | 42-9580  | 1    | Nut-Hex                  | 27       | 3256-22  | 2    | Washer-Flat             |
| 11       | 98-4729  | 1    | Lever-Valve              | 28       | 3256-23  | 4    | Washer-Flat             |
| 12       | 340-4    | 4    | Adapter-HYD              | 29       | 3296-29  | 4    | Nut-Lock, NI            |
| 12:1     | 237-30   | 1    | O-Ring                   | 30       | 3296-42  | 2    | Nut-Lock, NI            |
| 12:2     | 237-79   | 1    | O-Ring                   | 33       | 3290-379 | 18   | Tie-Cable               |
| 13       | 98-4799  | 2    | Tube-Spacer              |          |          |      |                         |
| 14       | 100-2245 | 1    | Hose ASM                 |          |          |      |                         |
| 15       | 98-4735  | 1    | Valve-Check, HYD         |          |          |      |                         |
| 15:1     | 237-30   | 1    | O-Ring                   |          |          |      |                         |
| 15:2     | 237-79   | 1    | O-Ring                   |          |          |      |                         |
| 16       | 321-14   | 2    | Screw-HH                 |          |          |      |                         |
| 17       | 104-4221 | 1    | Kit-Valve, HYD           |          |          |      |                         |
| 18       | 95-3209  | 1    | Fitting-Thread, Straight |          |          |      |                         |
| 18:1     | 237-79   | 2    | O-Ring                   |          |          |      |                         |
| 19       | 99-3072  | 1    | Valve-Selector           |          |          |      |                         |
| 20       | 100-1730 | 2    | Hose-Pump, HYD           |          |          |      |                         |
| 21       | 322-13   | 4    | Screw-HH                 |          |          |      |                         |



**Parts not listed in  
part list are not  
serviced separately**

Sheet No.: A4  
C-2836

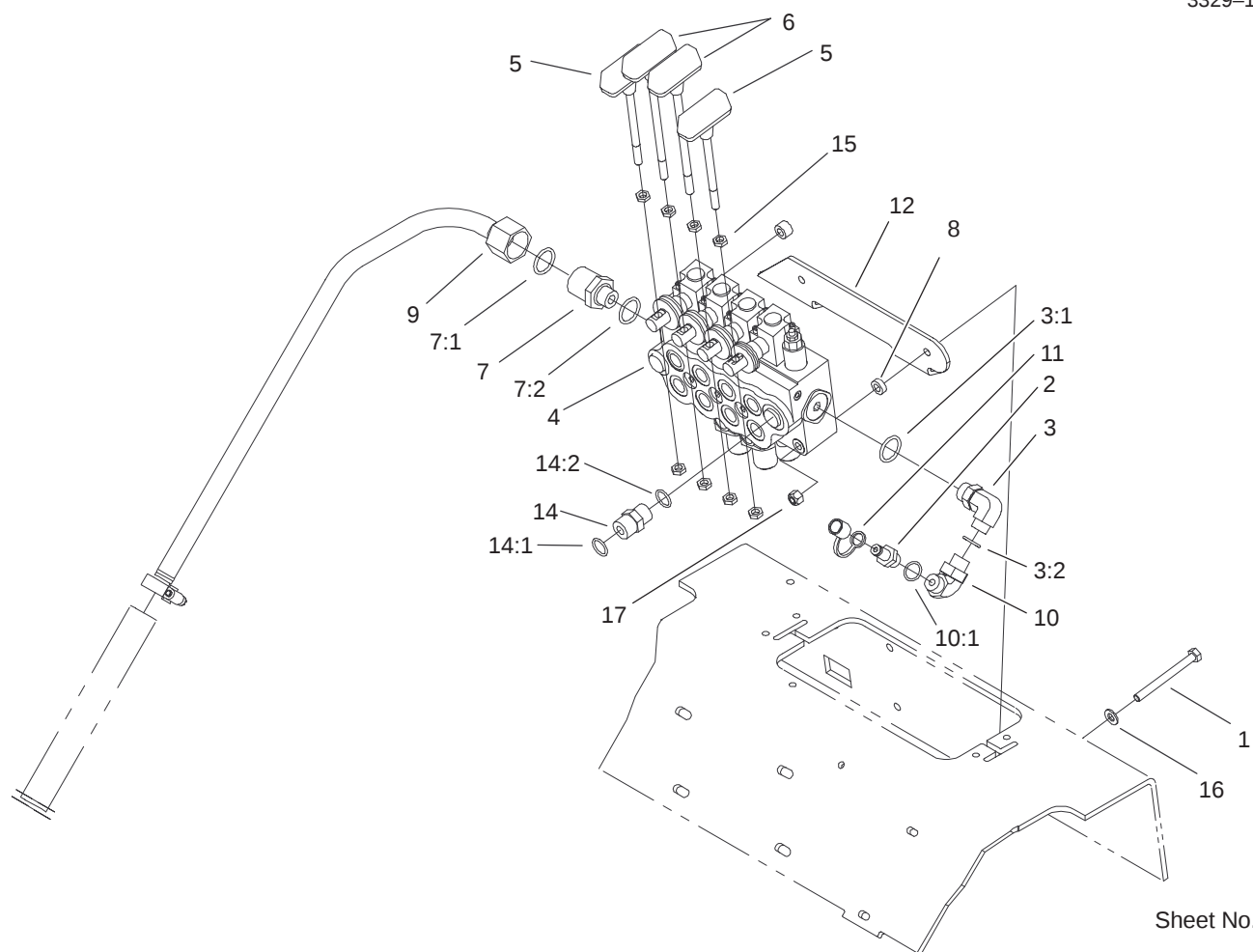
# Hydraulic Valve Assembly No. 99-3077

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
| 3        | 99-4391  | 1    | Seal Kit    |
| 3:1      | 99-3074  | 1    | Gasket      |
| 3:2      | 99-3075  | 3    | Gasket      |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |







Sheet No.: 12

## 4-Spool Valve Assembly

| Ref. No. | Part No.    | Qty. | Description                 |
|----------|-------------|------|-----------------------------|
| 1        | 322-20      | 3    | Screw-HH                    |
| 2        | 86-5480     | 1    | Nipple-Test                 |
| 3        | 340-18      | 1    | Fitting-HYD, 90°            |
| 3:1      | 237-79      | 1    | O-Ring                      |
| 3:2      | 237-22      | 1    | O-Ring                      |
| 4        | 99-3070     | 1    | Valve-HYD, 4-Spool          |
| 5        | 98-4671     | 2    | Cylinder Handle ASM         |
| 6        | 98-4670     | 2    | Drive Handle ASM            |
| 7        | 98-9921     | 1    | Fitting-Thread,<br>Straight |
| 7:1      | 237-145     | 1    | O-Ring                      |
| 7:2      | 237-79      | 1    | O-Ring                      |
| 8        | 99-3078     | 2    | Spacer                      |
| 9        | 99-3021     | 1    | HYD Tube ASM                |
| 10       | 340-159     | 1    | Fitting-HYD, 90°            |
| 10:1     | 237-22      | 2    | O-Ring                      |
| 11       | 354-79      | 1    | Cap-Dust                    |
| 12       | 104-4222-03 | 1    | Bracket-Cover, Mount        |
| 14       | 340-4       | 2    | Adapter-HYD                 |
| 14:1     | 237-30      | 1    | O-Ring                      |
| 14:2     | 237-79      | 1    | O-Ring                      |
| 15       | 42-9580     | 8    | Nut-Hex                     |
| 16       | 3256-23     | 3    | Washer-Flat                 |
| 17       | 3296-29     | 3    | Nut-Lock, NI                |
| 18       | 98-4695     | 1    | Spacer                      |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

Exploded view diagram of a hydraulic valve assembly. The diagram shows the main valve body (1) with various ports and mounting points. Key components and their assembly sequence are indicated by numbered callouts:

- 1**: Main valve body.
- 2**: O-ring for the top cover.
- 3**: Top cover plate.
- 4**: O-ring for the top cover.
- 5**: Spring for the top cover.
- 6**: Plug for the top cover.
- 7**: Plug for the top cover.
- 8**: Plug for the top cover.
- 9**: Spring for the top cover.
- 10**: Plug for the top cover.
- 11**: Plug for the top cover.
- 12**: Plug for the top cover.
- 13**: Plug for the top cover.
- 14**: Plug for the top cover.

Parts not listed in part list are not serviced separately

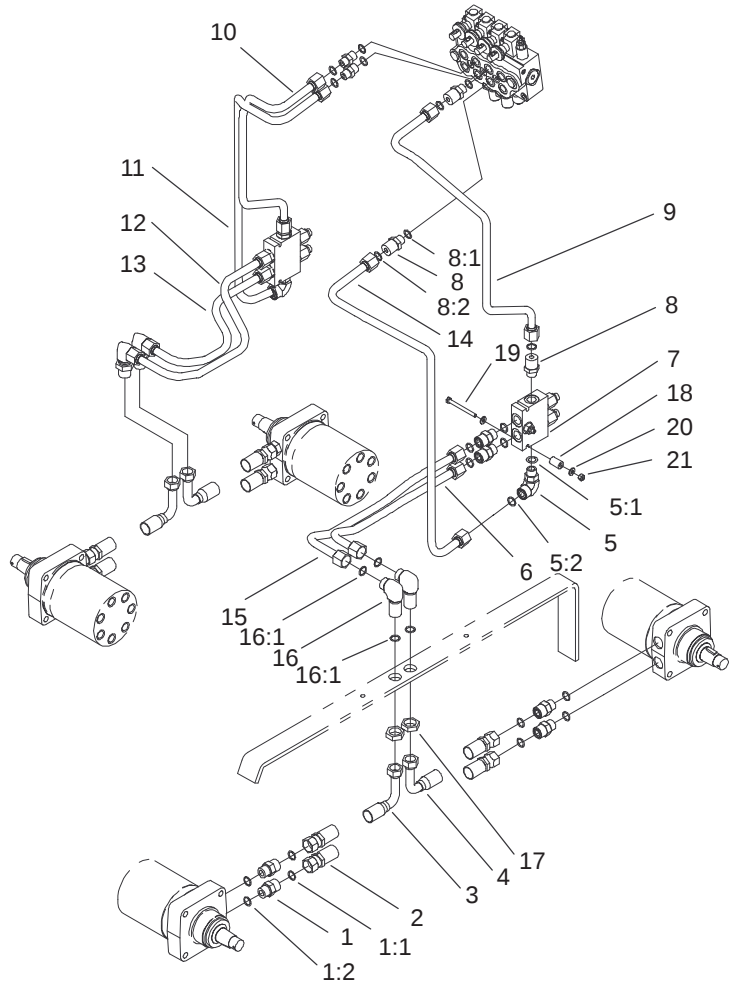
Sheet No.: A7  
C-2984

Sheet No.: A7  
C-2984

# Hydraulic Valve Assembly No. 99-3070

| Ref. No. | Part No. | Qty. | Description            |
|----------|----------|------|------------------------|
| 3        | 99-4390  | 1    | Kit-Seal               |
| 3:1      | 99-3074  | 4    | Gasket                 |
| 3:2      | 99-3075  | 8    | Gasket                 |
| 5        | 100-8801 | 4    | Kit-Spring, High Force |
| 6        | 100-8802 | 8    | Screw-Cap, End         |
| 7        | 100-8803 | 4    | Screw                  |
| 8        | 100-8804 | 2    | Block-Mount, Switch    |
| 9        | 100-8805 | 1    | Valve-Relief           |
| 10       | 100-8806 | 8    | Screw                  |
| 11       | 100-8807 | 4    | Operator ASM           |
| 14       | 100-8829 | 4    | Boot                   |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



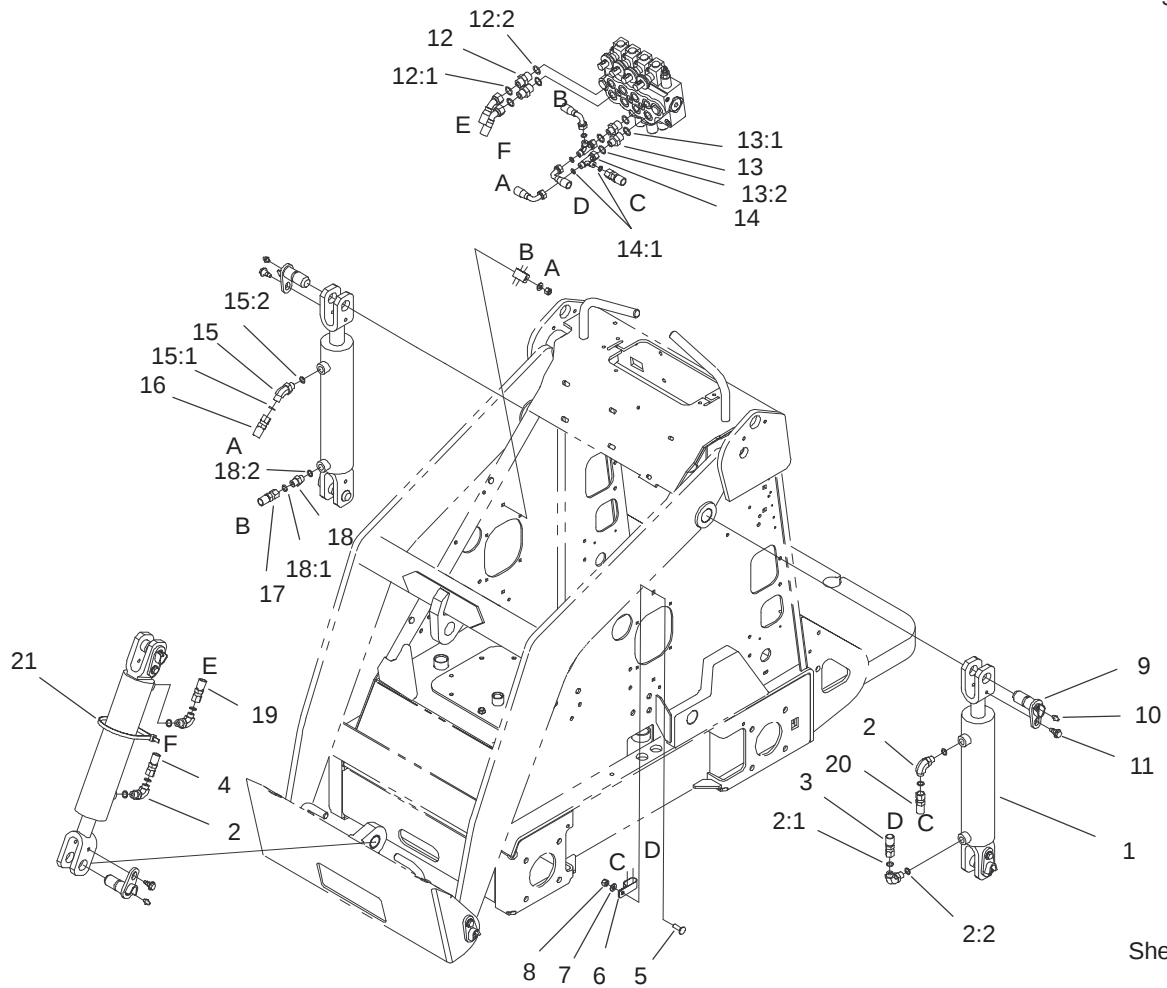
Sheet No.: 13

# Hydraulic Motor Assembly

| Ref. No. | Part No. | Qty. | Description                   |
|----------|----------|------|-------------------------------|
| 1        | 340-7    | 8    | Adapter                       |
| 1:1      | 237-65   | 1    | O-Ring                        |
| 1:2      | 237-80   | 1    | O-Ring                        |
| 2        | 99-3012  | 2    | HYD Hose ASM                  |
| 3        | 99-3010  | 2    | HYD Hose ASM                  |
| 4        | 99-3011  | 2    | HYD Hose ASM                  |
| 5        | 340-153  | 2    | Fitting-HYD                   |
| 5:1      | 237-79   | 1    | O-Ring                        |
| 5:2      | 237-151  | 1    | O-Ring                        |
| 6        | 99-3022  | 1    | HYD Tube ASM                  |
| 7        | 99-3040  | 2    | Valve-Counterbalance          |
| 8        | 340-155  | 10   | Fitting-HYD                   |
| 8:1      | 237-79   | 1    | O-Ring                        |
| 8:2      | 237-151  | 1    | O-Ring                        |
| 9        | 99-3027  | 1    | HYD Tube ASM                  |
| 10       | 99-3024  | 1    | HYD Tube ASM                  |
| 11       | 99-3029  | 1    | HYD Tube ASM                  |
| 12       | 99-3025  | 1    | HYD Tube ASM                  |
| 13       | 99-3028  | 1    | HYD Tube ASM                  |
| 14       | 99-3023  | 1    | HYD Tube ASM                  |
| 15       | 99-3026  | 1    | HYD Tube ASM                  |
| 16       | 340-72   | 4    | Fitting-HYD,<br>Bulkhead, 90° |
| 16:1     | 237-65   | 2    | O-Ring                        |
| 17       | 340-74   | 4    | Locknut-Bulkhead              |
| 18       | 99-3057  | 2    | Spacer-Valve                  |

| Ref. No. | Part No. | Qty. | Description  |
|----------|----------|------|--------------|
| 19       | 321-23   | 2    | Screw-HH     |
| 20       | 3256-22  | 4    | Washer-Flat  |
| 21       | 3296-42  | 2    | Nut-Lock, NI |

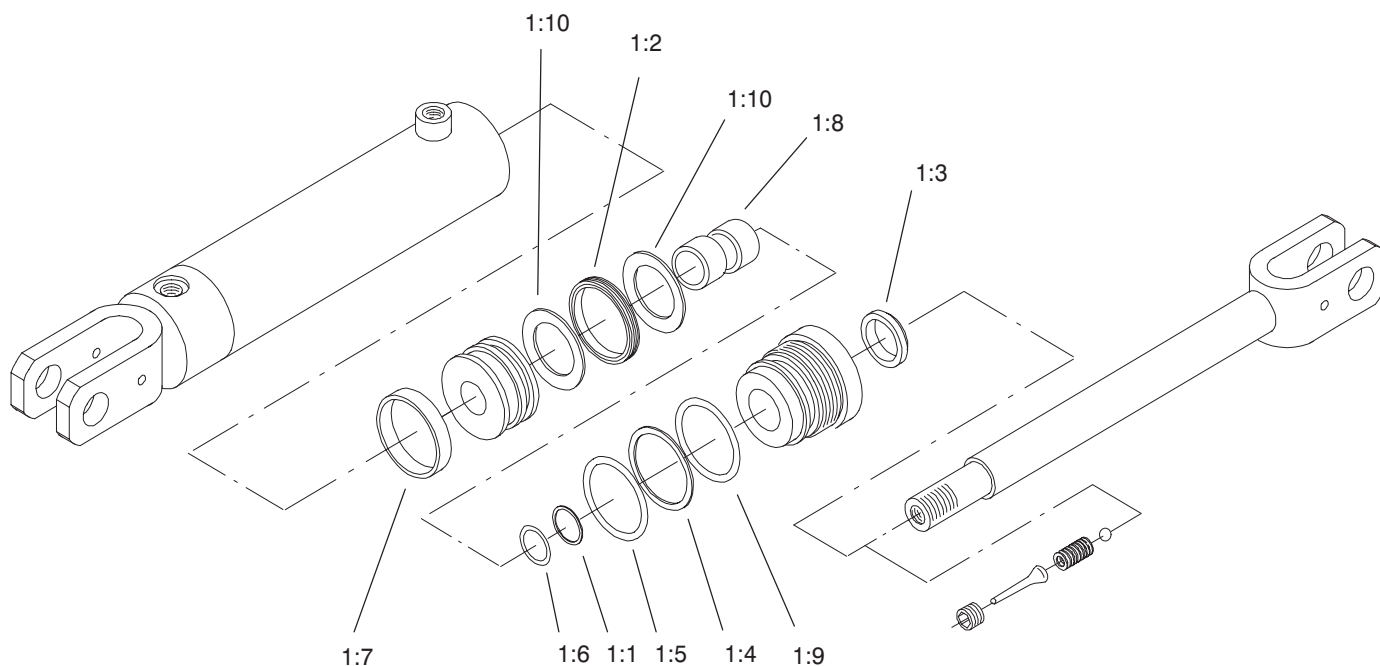




Sheet No.: 14

## Hydraulic Cylinder Assembly

| Ref. No. | Part No. | Qty. | Description     | Ref. No. | Part No. | Qty. | Description  |
|----------|----------|------|-----------------|----------|----------|------|--------------|
| 1        | 100-4163 | 3    | Kit-Cylinder    | 18       | 340-1    | 1    | Adapter      |
| 2        | 340-82   | 4    | Adapter         | 18:1     | 237-35   | 1    | O-Ring       |
| 2:1      | 237-42   | 1    | O-Ring          | 18:2     | 237-42   | 1    | O-Ring       |
| 2:2      | 237-21   | 1    | O-Ring          | 19       | 98-4727  | 1    | Hose-HYD     |
| 3        | 98-4748  | 1    | HYD Hose ASM    | 20       | 99-3109  | 1    | HYD Hose ASM |
| 4        | 98-4726  | 1    | Hose-HYD        | 21       | 3334-945 | 1    | Tie-Cable    |
| 5        | 3230-2   | 2    | Bolt-CARR       |          |          |      |              |
| 6        | 2412-137 | 2    | Clamp-Tube      |          |          |      |              |
| 7        | 3256-23  | 2    | Washer-Flat     |          |          |      |              |
| 8        | 3296-29  | 2    | Nut-Lock, NI    |          |          |      |              |
| 9        | 99-1414  | 6    | Pin-Pivot       |          |          |      |              |
| 10       | 302-5    | 6    | Fitting-Grease  |          |          |      |              |
| 11       | 99-5105  | 6    | Bolt-Shoulder   |          |          |      |              |
| 12       | 340-3    | 2    | Adapter         |          |          |      |              |
| 12:1     | 237-22   | 1    | O-Ring          |          |          |      |              |
| 12:2     | 237-79   | 1    | O-Ring          |          |          |      |              |
| 13       | 340-133  | 2    | Adapter         |          |          |      |              |
| 13:1     | 237-79   | 1    | O-Ring          |          |          |      |              |
| 13:2     | 237-21   | 1    | O-Ring          |          |          |      |              |
| 14       | 340-151  | 2    | Fitting         |          |          |      |              |
| 14:1     | 237-75   | 3    | O-Ring          |          |          |      |              |
| 15       | 340-137  | 1    | Fitting         |          |          |      |              |
| 15:1     | 237-21   | 1    | O-Ring          |          |          |      |              |
| 15:2     | 237-42   | 1    | O-Ring          |          |          |      |              |
| 16       | 98-4725  | 1    | HYD Hose ASM    |          |          |      |              |
| 17       | 100-1731 | 1    | Hose-HYD, Right |          |          |      |              |



**Parts not listed in  
part list are not  
serviced separately**

Sheet No.: A9

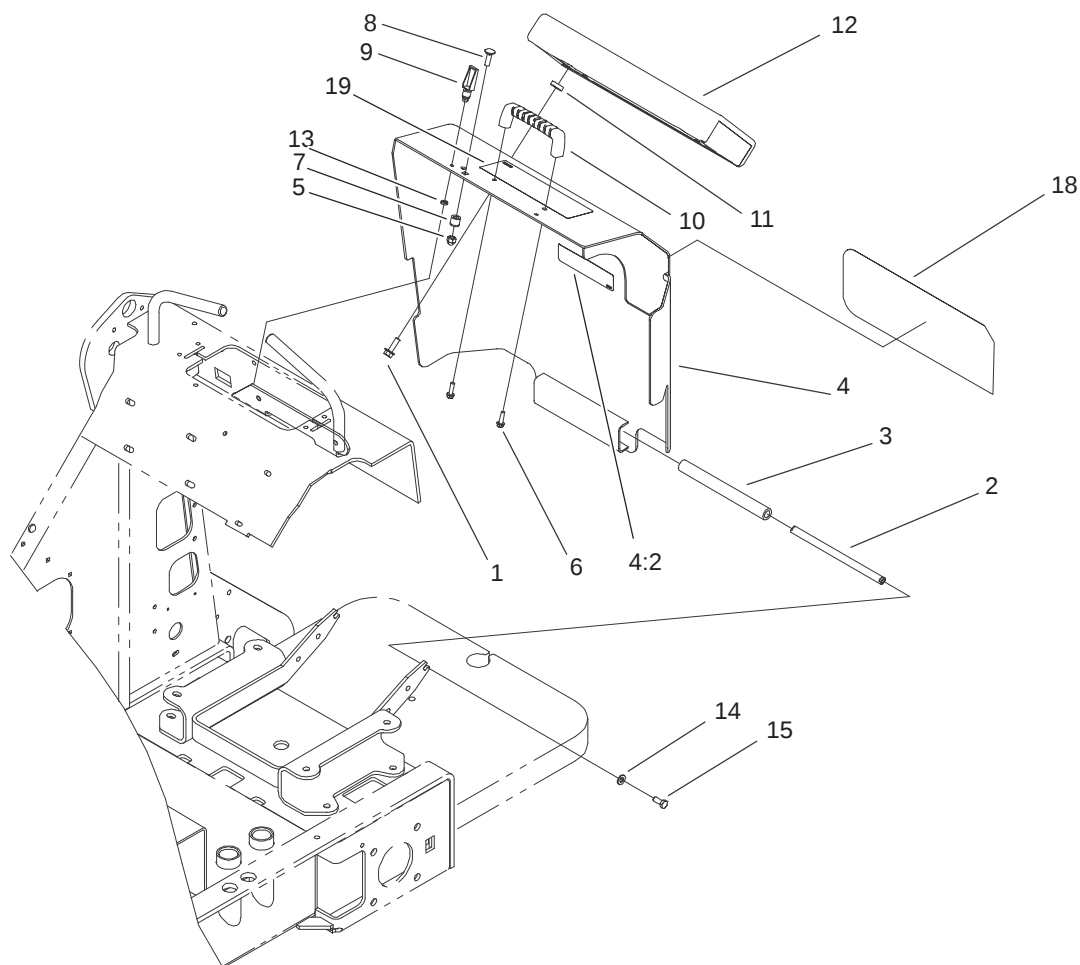
C-2985

# Hydraulic Cylinder Assembly No. 100-4163

| Ref. No. | Part No. | Qty. | Description   |
|----------|----------|------|---------------|
| 1        | 99-3065  | 1    | Kit-Seal      |
| ☆1:1     |          | 1    | Washer-Backup |
| ☆1:2     |          | 1    | Psp Seal      |
| ☆1:3     |          | 1    | Rod-Wiper     |
| ☆1:4     |          | 1    | Washer-Backup |
| ☆1:5     |          | 1    | O-Ring        |
| ☆1:6     |          | 1    | Polypack      |
| ☆1:7     |          | 1    | Wear Ring     |
| ☆1:8     |          | 1    | Wear Ring     |
| ☆1:9     |          | 1    | O-Ring        |
| ☆1:10    |          | 1    | Washer-Backup |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

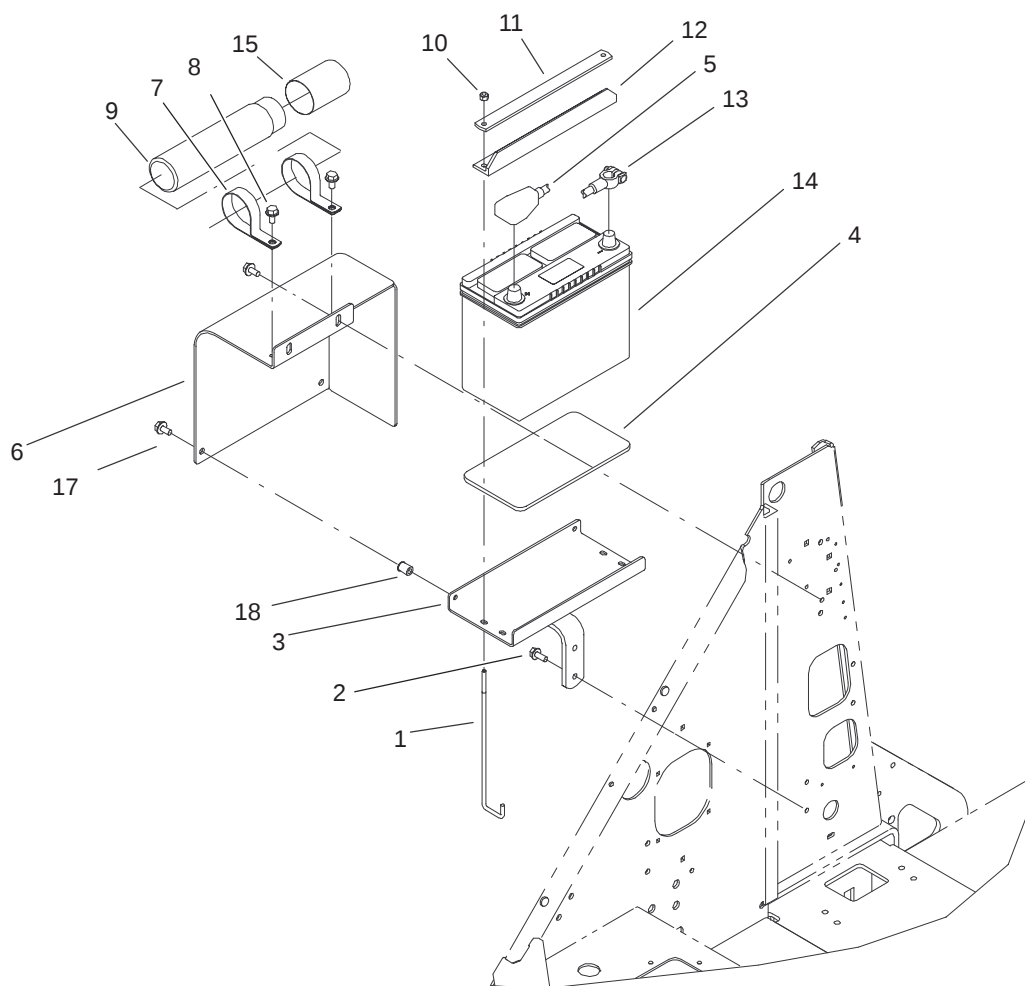
☆ Not serviced separately



Sheet No.: 15

## Rear Cover Assembly

| Ref. No. | Part No. | Qty. | Description          |
|----------|----------|------|----------------------|
| 1        | 3234-29  | 4    | Screw-HHF            |
| 2        | 99-3083  | 1    | Bar-Hinge            |
| 3        | 99-3085  | 1    | Hose-Hinge           |
| 4        | 104-9450 | 1    | Cover ASM            |
| 4:2      | 93-7814  | 1    | Decal-Danger         |
| 5        | 32111-8  | 1    | Locknut-Acorn        |
| 6        | 46-8091  | 2    | Screw-HWH            |
| 7        | 99-3035  | 1    | Spacer-Guide         |
| 8        | 3230-22  | 1    | Screw-CARR           |
| 9        | 74-5950  | 2    | Latch-Swell          |
| 10       | 65-5100  | 1    | Handle-Door          |
| 11       | 26-4840  | 4    | Spacer-Pin, Mounting |
| 12       | 99-3101  | 1    | Cover-Pad            |
| 13       | 99-3058  | 2    | Washer               |
| 14       | 3256-23  | 2    | Washer-Flat          |
| 15       | 322-3    | 2    | Screw-HH             |
| 18       | 93-7340  | 1    | Decal-Toro           |
| 19       | 98-9051  | 1    | Decal-Danger         |

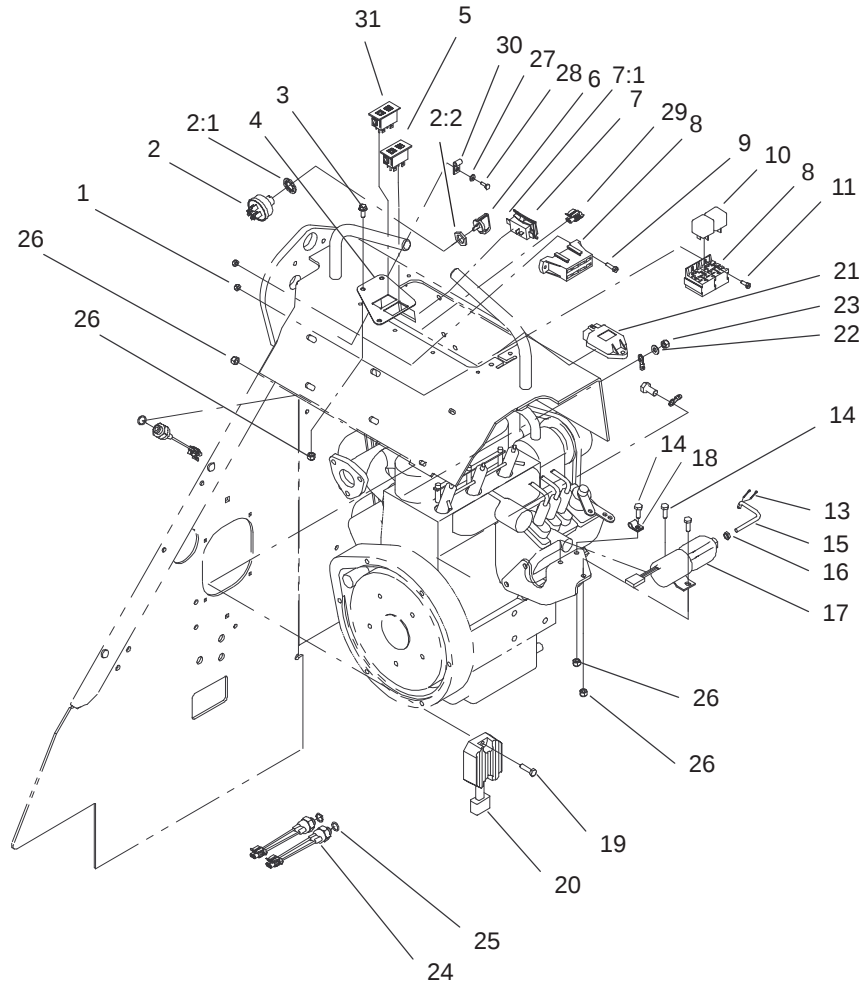


Sheet No.: 17

## Battery Mount Assembly

| Ref. No. | Part No.   | Qty. | Description                |
|----------|------------|------|----------------------------|
| 1        | 99-5035    | 2    | Retainer-Battery           |
| 2        | 32144-70   | 2    | Screw-HH                   |
| 3        | 98-2665-03 | 1    | Battery Mount              |
| 4        | 99-5030    | 1    | Pad-Battery                |
| 5        | 100-1708   | 1    | Cable-Battery,<br>Positive |
| 6        | 98-2670-03 | 1    | Cover-Battery              |
| 7        | 2412-133   | 2    | R-Clamp                    |
| 8        | 32144-14   | 4    | Screw-HWH                  |
| 9        | 104-7050   | 1    | Housing-Manual             |
| 10       | 3296-42    | 2    | Nut-Lock, NI               |
| 11       | 99-5008-01 | 1    | Retainer-Battery           |
| 12       | 99-5039    | 1    | Retainer-Battery           |
| 13       | 100-1709   | 1    | Cable-Battery,<br>Negative |
| 14       | 99-1441    | 1    | Battery                    |
| 15       | 104-7048   | 1    | Cap-Housing                |
| 17       | 3234-29    | 2    | Screw-HHF                  |
| 18       | 32148-7    | 2    | Insert-Nut                 |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



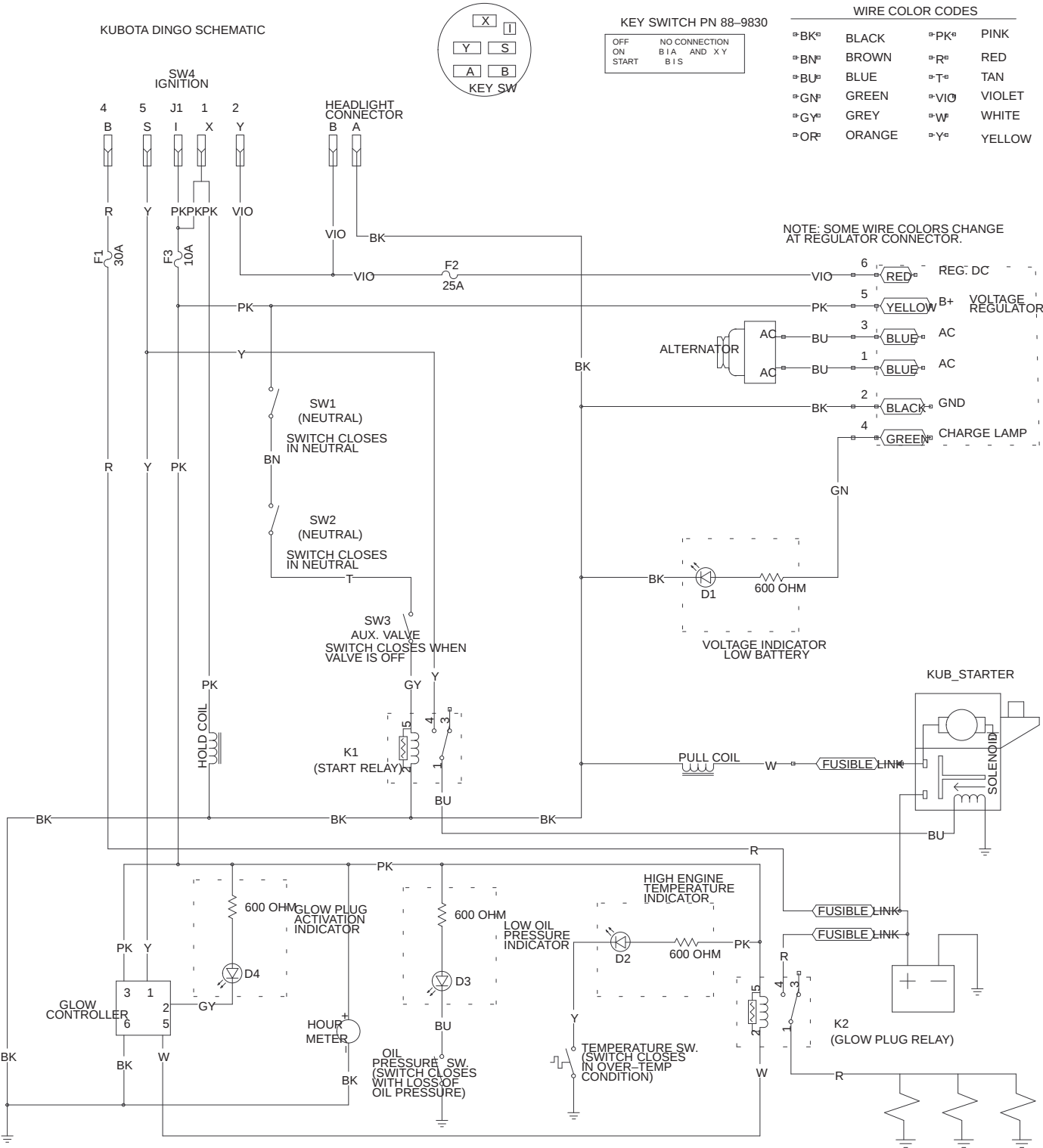
Sheet No.: 18

# Electrical Components Assembly

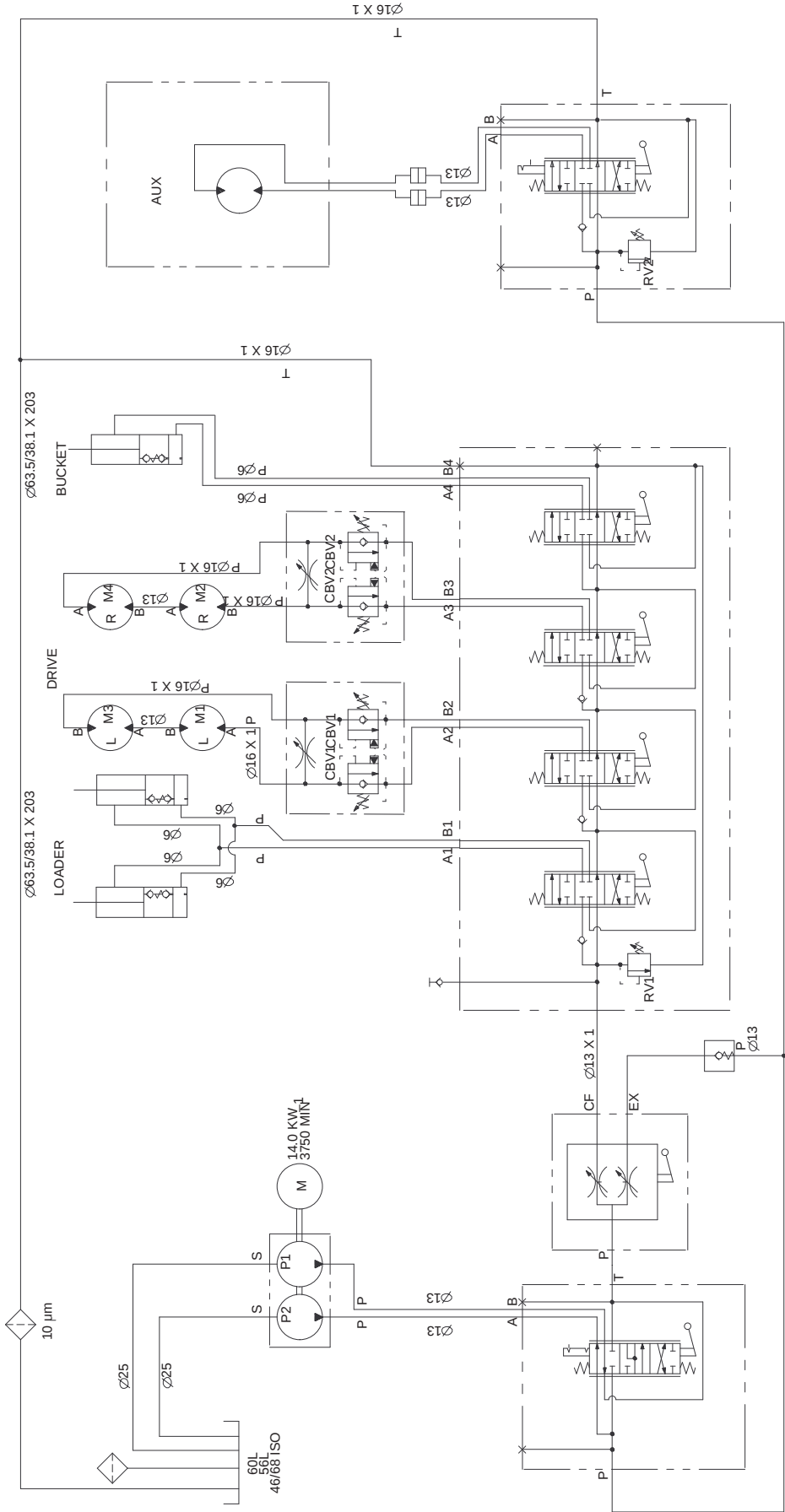
| Ref. No. | Part No.    | Qty. | Description         |
|----------|-------------|------|---------------------|
| 1        | 3296-12     | 4    | Nut-Lock            |
| 2        | 88-9830     | 1    | Key Switch ASM      |
| 2:1      | 3254-5      | 1    | Washer-Tooth        |
| 2:2      | 218-461     | 1    | Nut-HH              |
| 3        | 3234-33     | 3    | Screw-HHF           |
| 4        | 105-1249-01 | 1    | Mount-Lamp, Warning |
| 5        | 100-8070    | 1    | Lamp-Warning        |
| 6        | 63-8360     | 2    | Key-Ignition        |
| 7        | 104-7429    | 1    | Meter-Hour          |
| 7:1      | 104-4234    | 1    | Clip-Mounting       |
| 8        | 105-4069    | 1    | Harness-Wire        |
| 9        | 32105-13    | 2    | Screw-SHH           |
| 10       | 98-7249     | 2    | Relay               |
| 11       | 32105-8     | 1    | Screw               |
| 13       | 3272-1      | 2    | Pin-Cotter          |
| 14       | 321-4       | 3    | Screw-HH            |
| 15       | 105-6243    | 1    | Rod-Linkage         |
| 16       | 3220-1      | 1    | Nut-Jam             |
| 17       | 99-5006     | 1    | Solenoid            |
| 18       | 2412-31     | 1    | Clamp-Boden         |
| 19       | 321-6       | 3    | Screw-HH            |
| 20       | 100-2057    | 1    | Regulator ASM       |
| 21       | 98-7611     | 1    | Controller-Glow     |
| 22       | 100-2215    | 1    | Washer-Spring       |
| 23       | 100-2171    | 1    | Nut-Hexagon         |
| 24       | 72-4310     | 3    | Switch-Ball         |

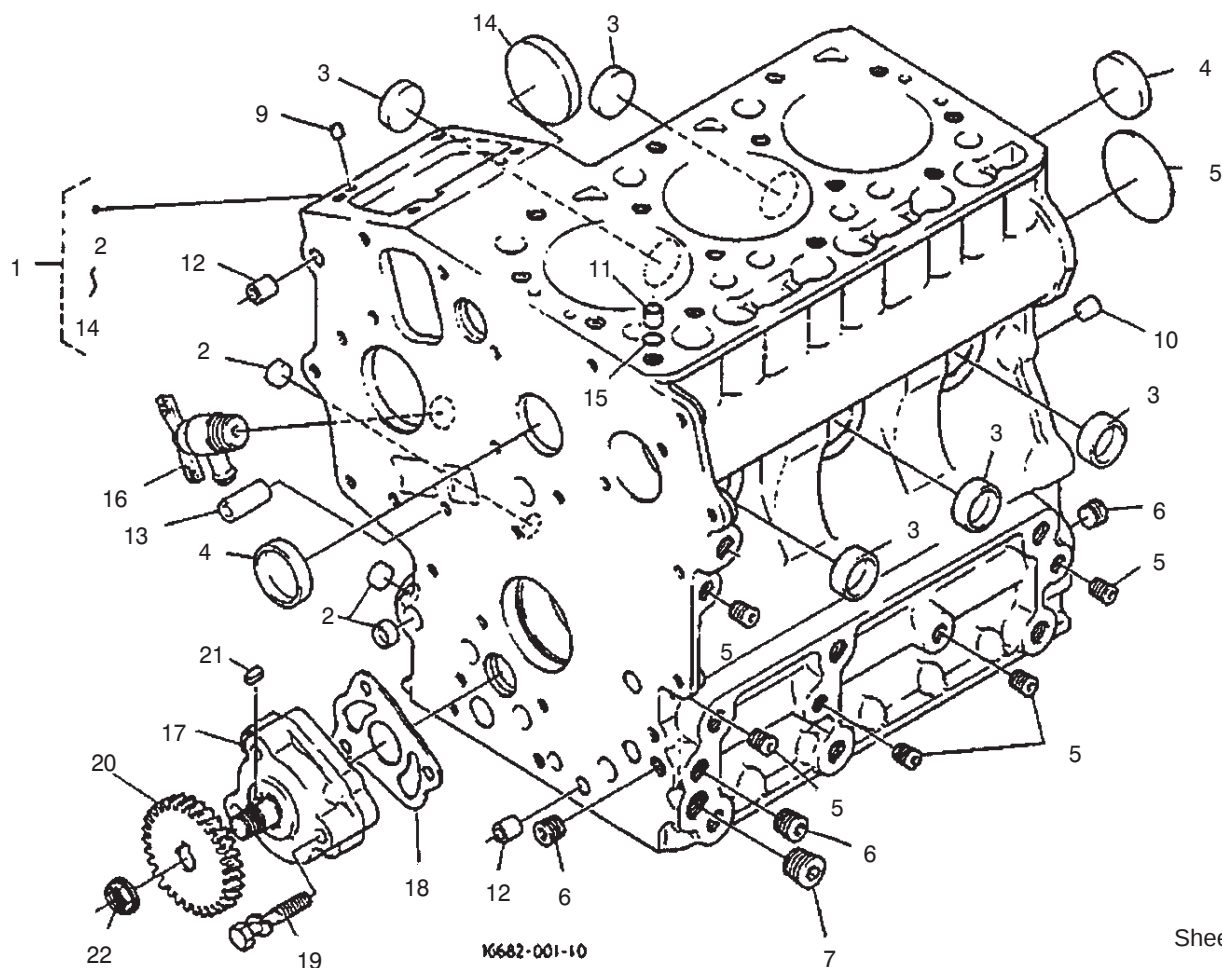
| Ref. No. | Part No. | Qty. | Description            |
|----------|----------|------|------------------------|
| 25       | 237-42   | 3    | O-Ring                 |
| 26       | 3296-42  | 9    | Nut-Lock, NI           |
| 27       | 3256-21  | 1    | Washer-Flat            |
| 28       | 32144-87 | 1    | Screw-Forming, Thread  |
| 29       | 99-1433  | 2    | Connector-Female       |
| 30       | 2412-72  | 1    | Clip-Closed, Insulated |
| 31       | 100-8071 | 1    | Lamp-Warning           |

# Electrical Schematic



# Hydraulic Schematic



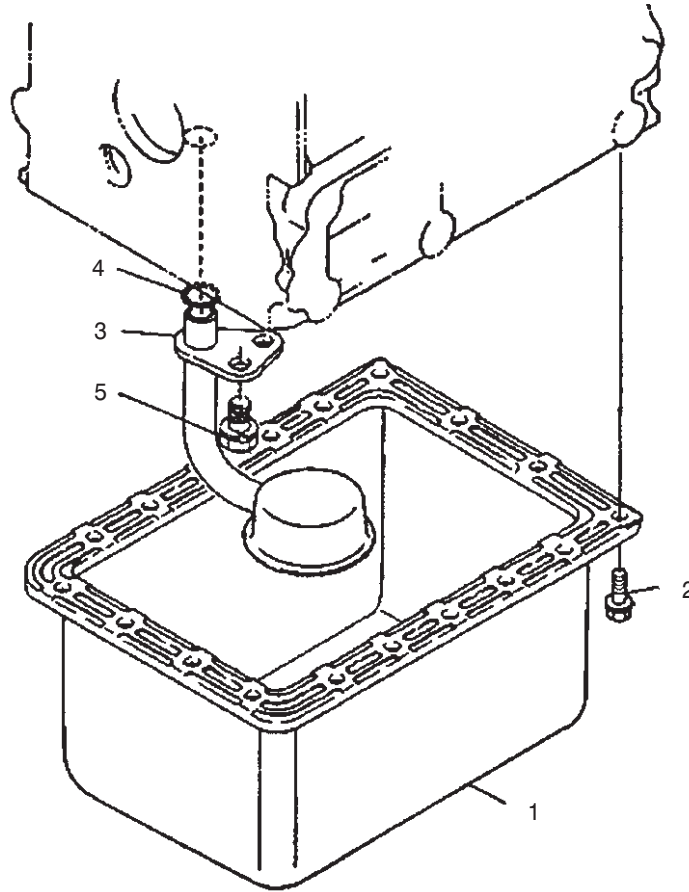


Sheet No.:2

## Crankcase Assembly

| Ref. No. | Part No. | Qty. | Description          |
|----------|----------|------|----------------------|
| 1        | 100-2167 | 1    | Crankcase-Comp.      |
| 2        | 100-2019 | 3    | Cap-Sealing          |
| 3        | 100-2020 | 5    | Cap-Sealing          |
| 4        | 98-9398  | 2    | Cap-Sealing          |
| 5        | 98-7540  | 5    | Cap-Sealing          |
| 6        | 98-7487  | 3    | Plug                 |
| 7        | 98-7488  | 1    | Plug                 |
| 8        | 100-1851 | 1    | Plug                 |
| 9        | 98-9375  | 2    | Pin-Straight         |
| 10       | 98-9377  | 2    | Pin-Straight         |
| 11       | 98-7506  | 1    | Pin-Pipe             |
| 12       | 98-9387  | 2    | Pin-Pipe             |
| 13       | 100-2051 | 2    | Pin-Pipe             |
| 14       | 100-1991 | 1    | Cover-Fuel, Camshaft |
| 15       | 98-7509  | 1    | O-Ring               |
| 16       | 98-9436  | 1    | Drain Cock ASM       |
| 17       | 100-2002 | 1    | Oil Pump ASM         |
| 18       | 100-2003 | 1    | Gasket-Pump, Oil     |
| 19       | 100-1923 | 3    | Bolt                 |
| 20       | 100-1893 | 1    | Gear-Drive, Oil Pump |
| 21       | 98-7658  | 1    | Key-Feather          |
| 22       | 100-1779 | 1    | Nut-Flange           |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



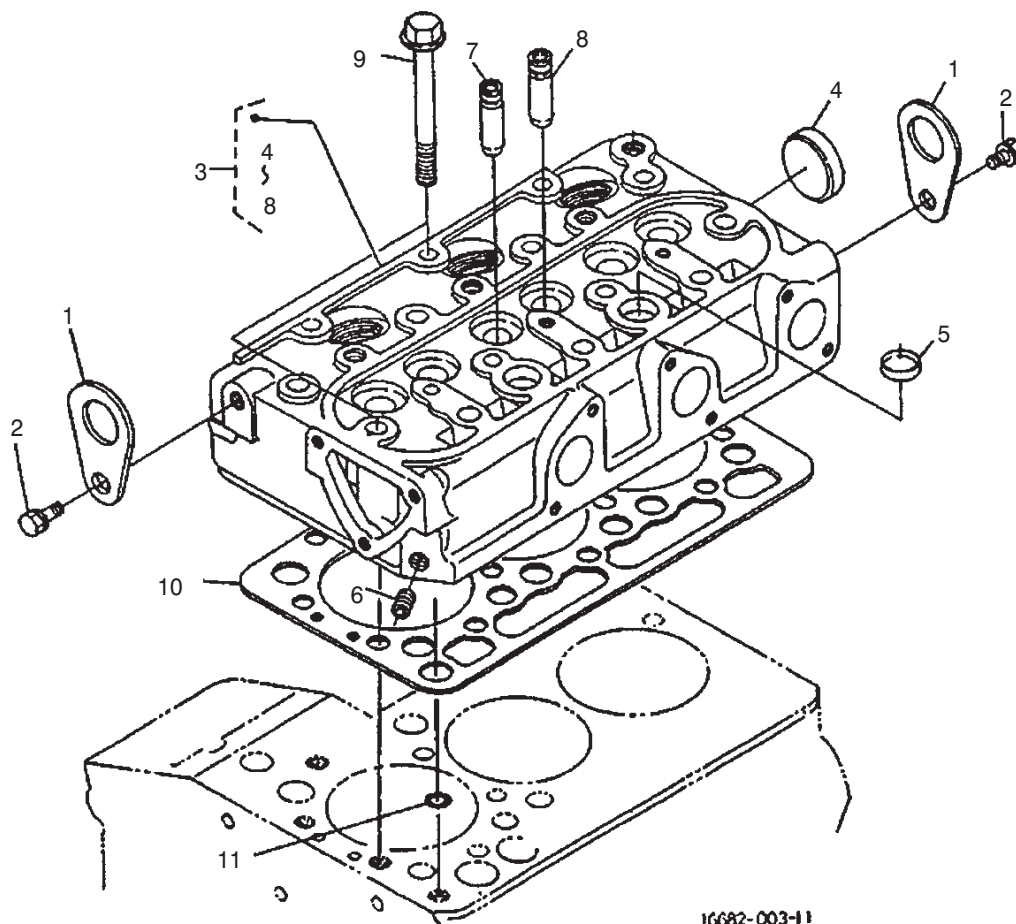
16602-002-10

Sheet No.:3

## Oil Pan Assembly

| Ref. No. | Part No. | Qty. | Description    |
|----------|----------|------|----------------|
| 1        | 100-2239 | 1    | Pan-Oil, Comp. |
| 2        | 98-9350  | 18   | Bolt           |
| 3        | 100-2001 | 1    | Filter-Oil     |
| 4        | 100-2205 | 1    | O-Ring         |
| 5        | 98-7585  | 1    | Bolt           |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



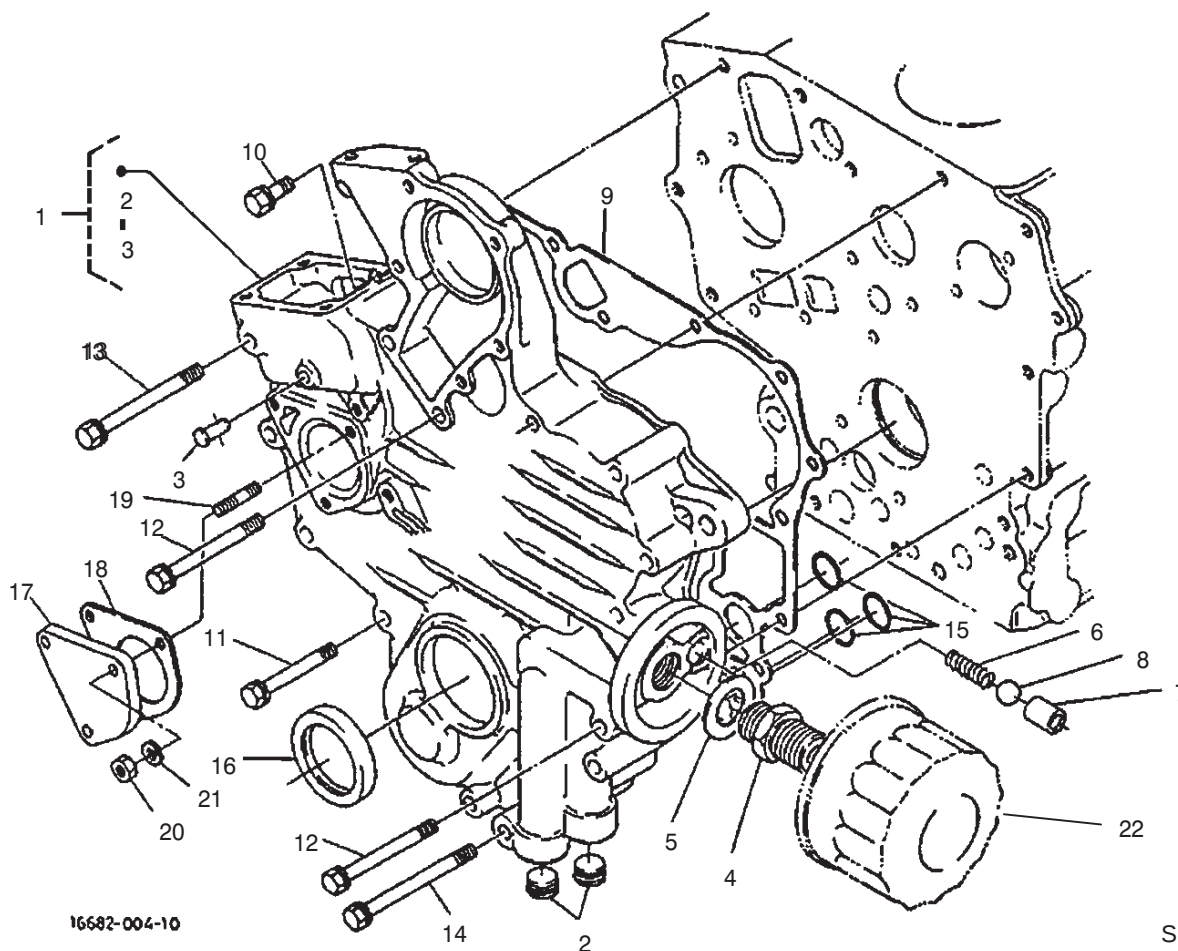
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Sheet No.:4

## Cylinder Head Assembly

| Ref. No. | Part No. | Qty. | Description              |
|----------|----------|------|--------------------------|
| 1        | 98-7531  | 2    | Hook-Engine              |
| 2        | 98-7526  | 2    | Bolt                     |
| 3        | 100-2246 | 1    | Head-Cylinder, Comp.     |
| 4        | 98-9395  | 1    | Cap-Sealing              |
| 5        | 98-9389  | 2    | Cap-Sealing              |
| 6        | 98-7540  | 1    | Cap-Sealing              |
| 7        | 100-1882 | 3    | Guide-Valve, Inlet       |
| 8        | 100-1883 | 3    | Guide-Valve, Exhaust     |
| 9        | 100-1820 | 14   | Bolt-Head, Cylinder      |
| 10       | 100-2043 | 1    | Gasket-Head,<br>Cylinder |
| 11       | 98-7509  | 1    | O-Ring                   |

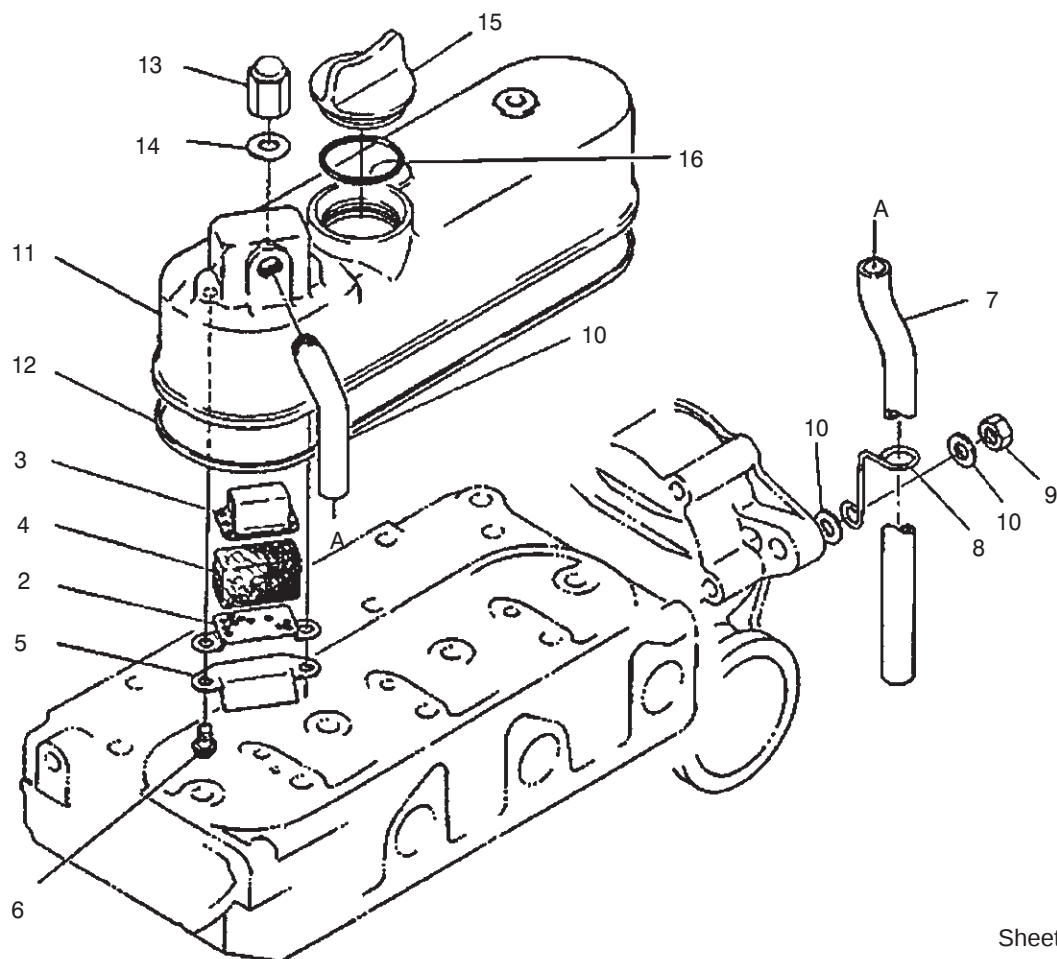
| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



Sheet No.:5

## Gear Case Assembly

| Ref. No. | Part No. | Qty. | Description             |
|----------|----------|------|-------------------------|
| 1        | 100-2048 | 1    | Case-Gear, Comp.        |
| 2        | 98-7546  | 2    | Plug                    |
| 3        | 100-1910 | 1    | Pin-Spring, Start       |
| 4        | 98-9388  | 1    | Joint-Pipe              |
| 5        | 100-1926 | 1    | Washer-Plain            |
| 6        | 100-2004 | 1    | Spring                  |
| 7        | 100-1894 | 1    | Seat-Valve              |
| 8        | 100-1792 | 1    | Ball                    |
| 9        | 100-1954 | 1    | Gasket-Case, Gear       |
| 10       | 98-7605  | 1    | Bolt                    |
| 11       | 100-2201 | 8    | Bolt                    |
| 12       | 100-1922 | 5    | Bolt                    |
| 13       | 100-1766 | 1    | Bolt                    |
| 14       | 100-1767 | 1    | Bolt                    |
| 15       | 100-2206 | 3    | O-Ring                  |
| 16       | 100-1971 | 1    | Seal-Oil                |
| 17       | 100-2060 | 1    | Cover                   |
| 18       | 100-2061 | 1    | Gasket-Gearcase,<br>H/M |
| 19       | 98-7571  | 3    | Stud                    |
| 20       | 98-7572  | 3    | Nut                     |
| 21       | 98-9367  | 3    | Washer-Spring           |
| 22       | 100-1892 | 1    | Cartridge-Filter, Oil   |

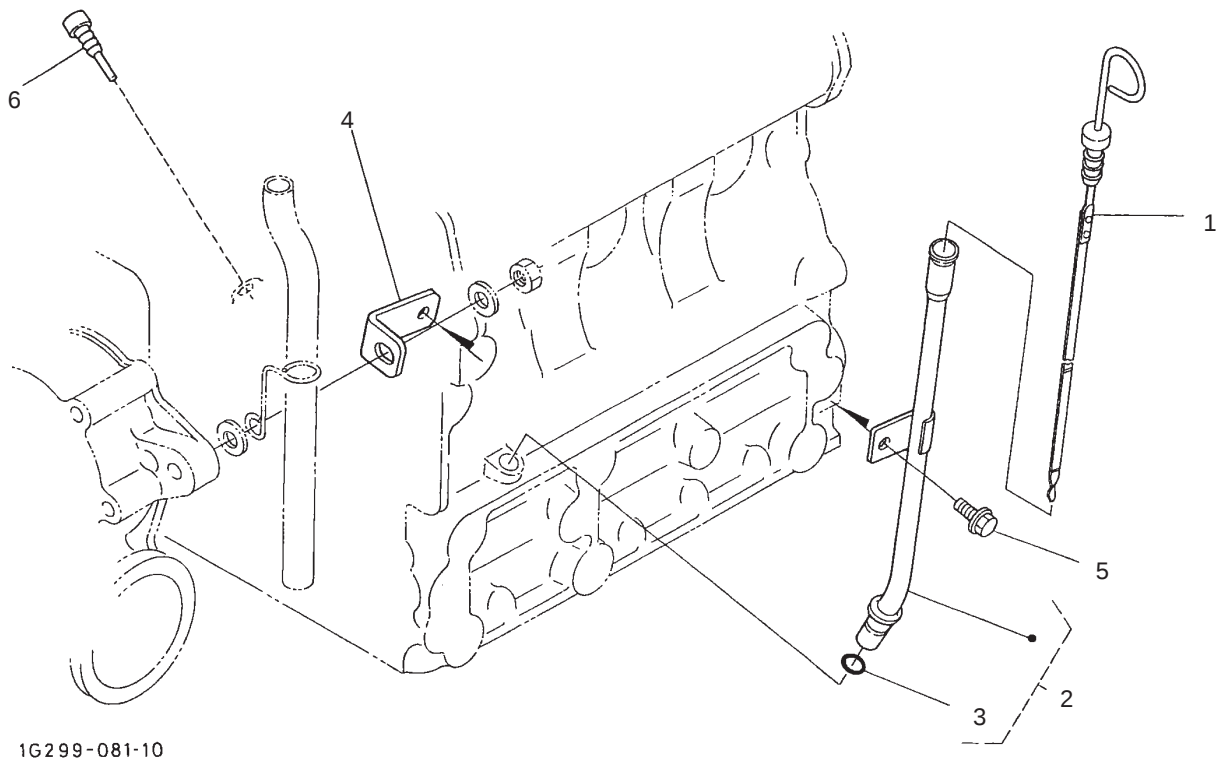


Sheet No.:6

## Head Cover Assembly

| Ref. No. | Part No. | Qty. | Description          |
|----------|----------|------|----------------------|
| 1        | 100-1972 | 1    | Joint-Pipe, Breather |
| 2        | 100-1877 | 1    | Plate-Element        |
| 3        | 100-1878 | 1    | Plate-Element        |
| 4        | 100-1881 | 1    | Element-Breather     |
| 5        | 100-1879 | 1    | Breather-Shield, Oil |
| 6        | 100-2040 | 2    | Screw                |
| 7        | 100-1880 | 1    | Pipe-Breather        |
| 8        | 100-1973 | 1    | Clamp-Pipe           |
| 9        | 98-7739  | 1    | Nut                  |
| 10       | 98-7660  | 2    | Washer-Plain         |
| 11       | 100-2029 | 1    | Cover-Head, Cylinder |
| 12       | 100-2030 | 1    | Gasket-Cover, Head   |
| 13       | 98-7655  | 3    | Nut-Cap              |
| 14       | 98-7654  | 3    | Gasket               |
| 15       | 98-9449  | 1    | Plug-Filler, Oil     |
| 16       | 99-3446  | 1    | O-Ring               |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

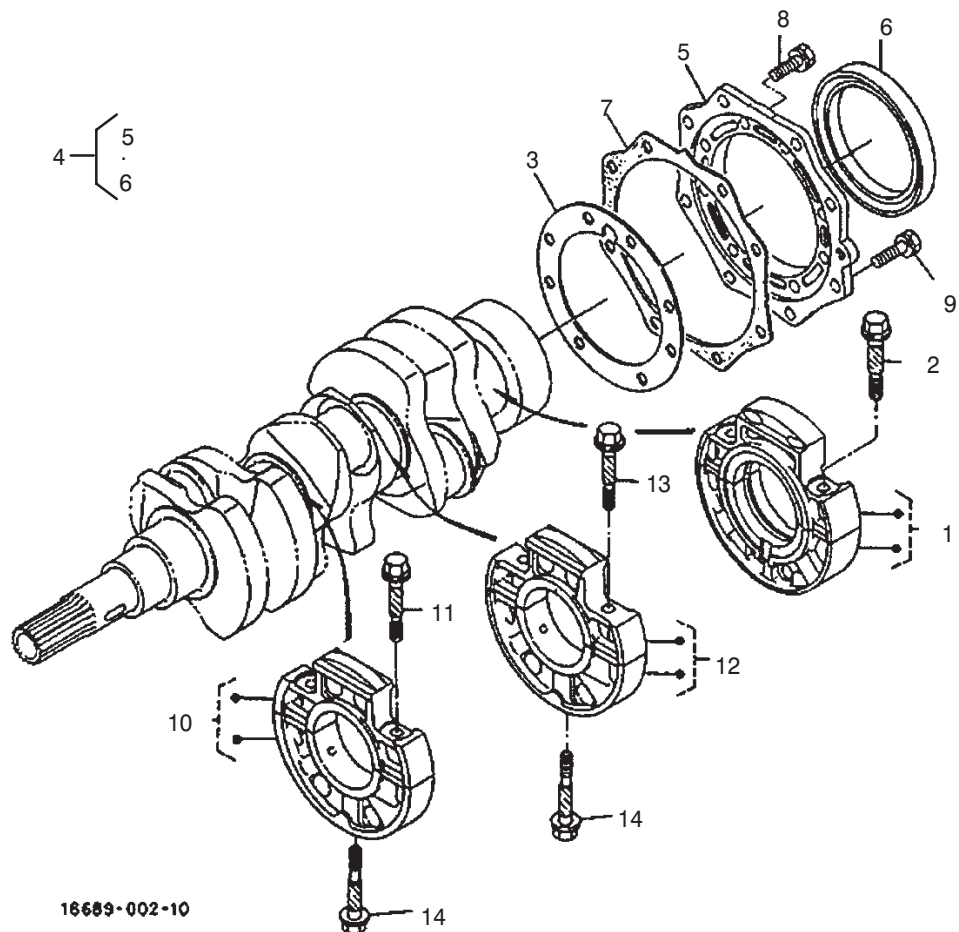


Sheet No.:7

## Dipstick and Guide Assembly

| Ref. No. | Part No. | Qty. | Description             |
|----------|----------|------|-------------------------|
| 1        | 100-2247 | 1    | Gauge-Oil               |
| 2        | 100-2249 | 1    | Oil Gauge Guide ASM     |
| 3        | 98-9374  | 1    | O-Ring                  |
| 4        | 100-2248 | 1    | Support-Guide,<br>Gauge |
| 5        | 100-1774 | 1    | Bolt-Flange             |
| 6        | 100-2229 | 1    | Plug-Rubber             |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

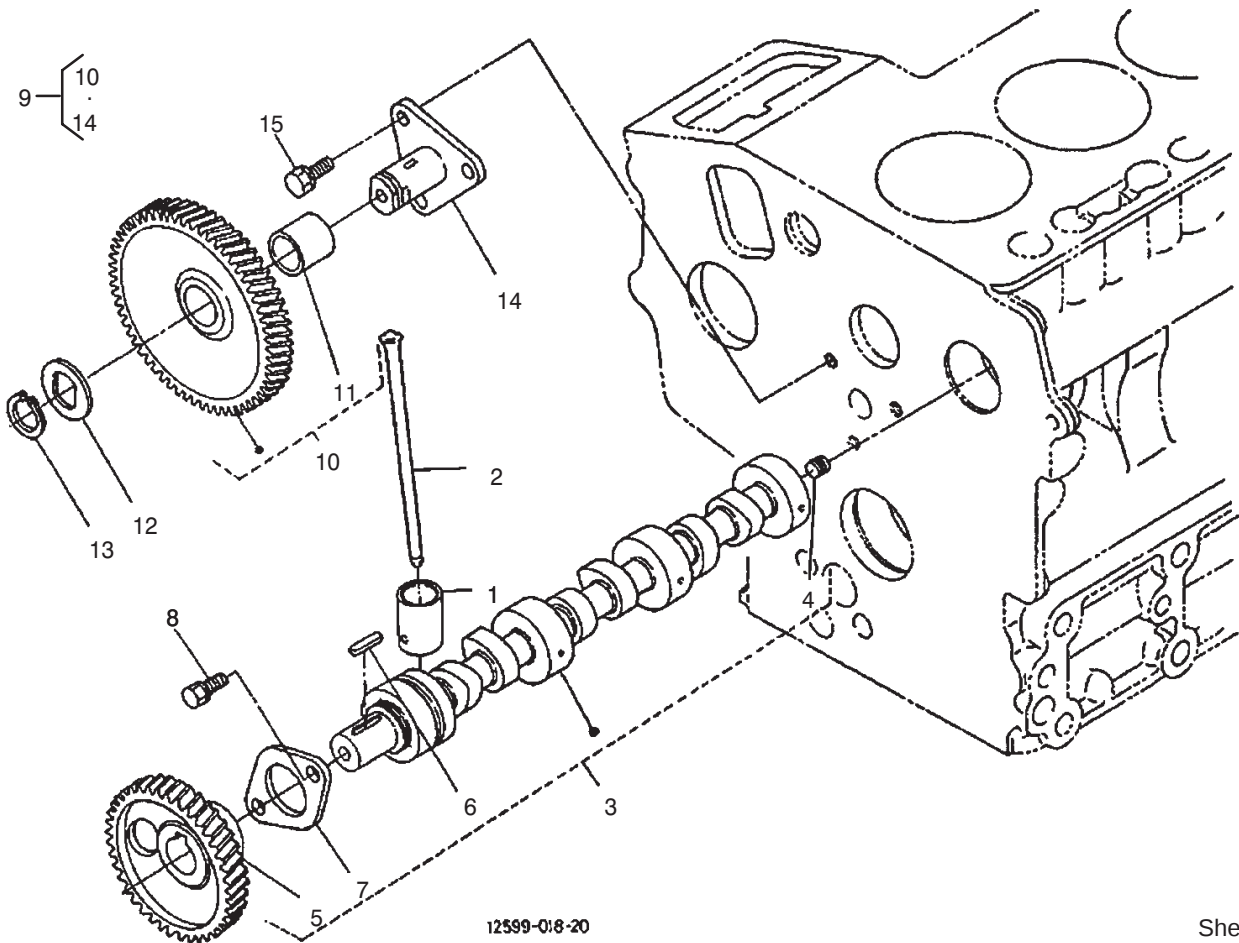


Sheet No.:8

## Main Bearing Case Assembly

| Ref. No. | Part No. | Qty. | Description               |
|----------|----------|------|---------------------------|
| 1        | 100-1988 | 1    | Main Brg. Case ASM        |
| 2        | 100-1757 | 2    | Bolt-Case, Bearing        |
| 3        | 100-1929 | 1    | Gasket-Case, Bearing      |
| 4        | 100-2233 | 1    | Bearing Case Cover<br>ASM |
| 5        | 100-1875 | 1    | Cover-Case, Bearing       |
| 6        | 100-2055 | 1    | Seal-Oil                  |
| 7        | 100-1876 | 1    | Gasket-Case, Bearing      |
| 8        | 98-7568  | 8    | Bolt                      |
| 9        | 100-1750 | 8    | Bolt                      |
| 10       | 100-1987 | 1    | Main Bearing Case<br>ASM  |
| 11       | 100-1757 | 2    | Bolt-Case, Bearing        |
| 12       | 100-2027 | 1    | Main Bearing Case<br>ASM  |
| 13       | 100-1757 | 2    | Bolt-Case, Bearing        |
| 14       | 100-1874 | 2    | Bolt-Case, Bearing        |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

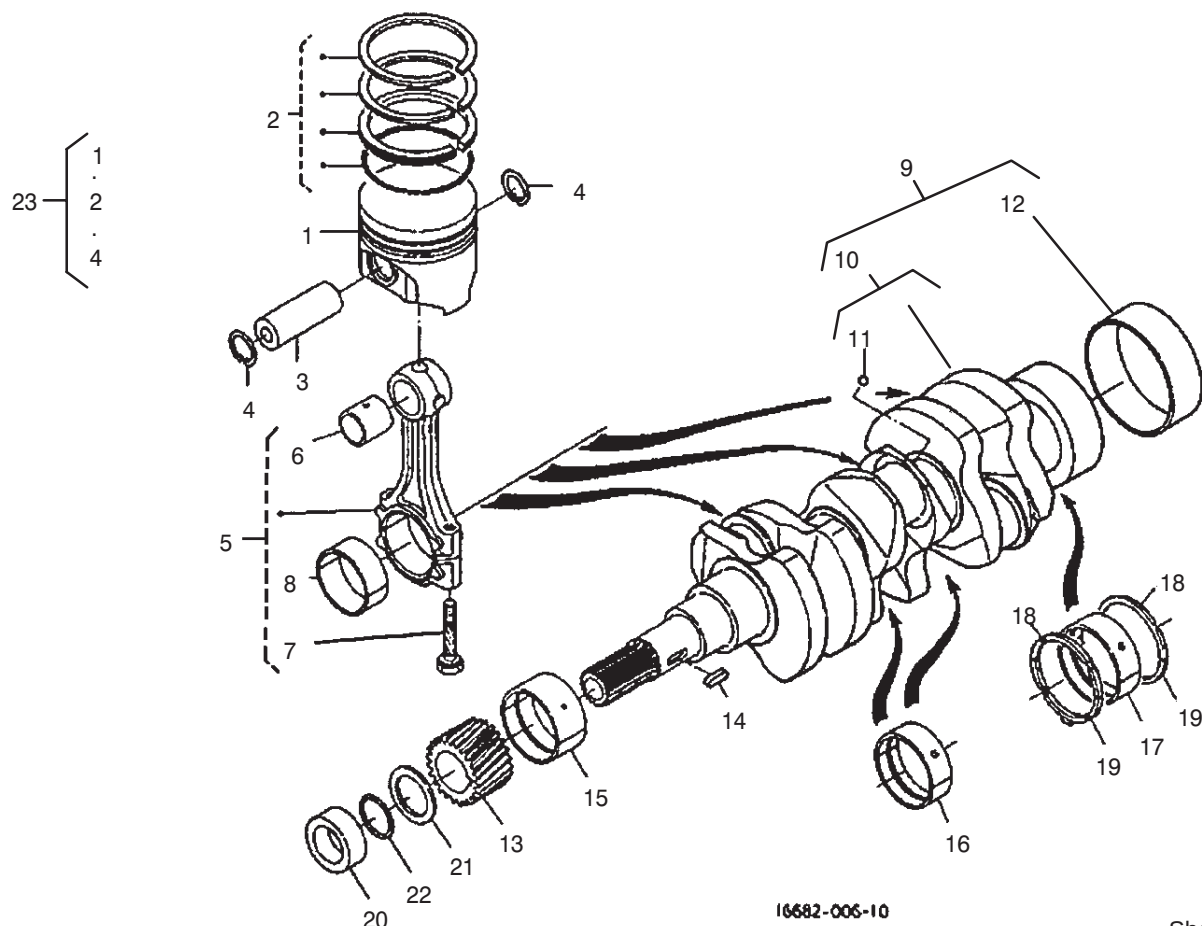


Sheet No.:9

# Camshaft Assembly

| Ref. No. | Part No. | Qty. | Description         |
|----------|----------|------|---------------------|
| 1        | 100-1990 | 6    | Tappet              |
| 2        | 100-1989 | 6    | Rod-Push            |
| 3        | 100-2162 | 1    | Camshaft ASM        |
| 4        | 98-7449  | 1    | Screw-Set           |
| 5        | 100-2163 | 1    | Gear-Cam            |
| 6        | 98-9378  | 1    | Key-Feather         |
| 7        | 100-1887 | 1    | Camshaft-Stopper    |
| 8        | 98-9350  | 2    | Bolt                |
| 9        | 100-2240 | 1    | Ser/V Idle Gear ASM |
| 10       | 100-1966 | 1    | Gear-Idle, Comp.    |
| 11       | 100-1968 | 1    | Bush                |
| 12       | 100-1970 | 1    | Collar-Gear, Idle   |
| 13       | 100-1969 | 1    | Ring-Snap           |
| 14       | 100-1967 | 1    | Shaft-Gear, Idle    |
| 15       | 98-9351  | 3    | Bolt                |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



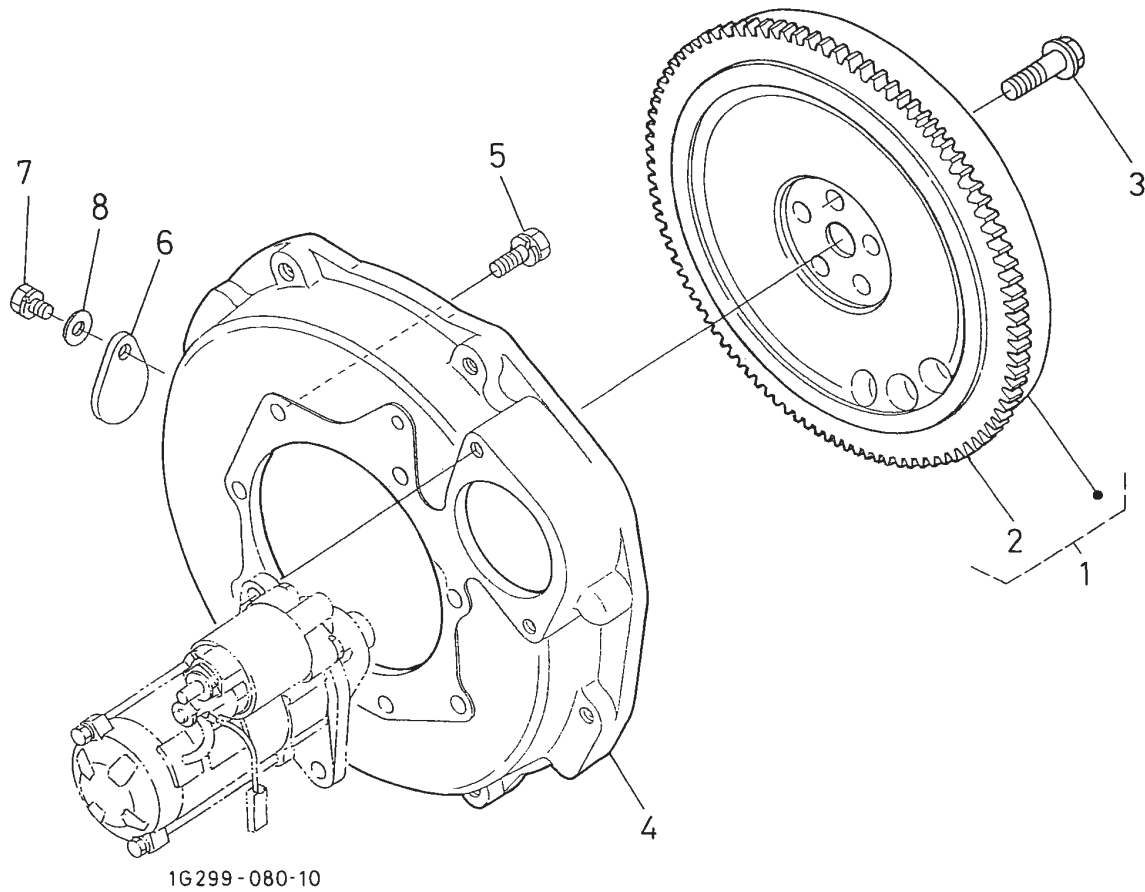
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Sheet No.:10

## Piston and Crankshaft Assembly

| Ref. No. | Part No. | Qty. | Description                |
|----------|----------|------|----------------------------|
| 1        | 100-1994 | 3    | Piston (STD.)              |
| 1        | 100-1996 | 3    | Piston (+0.25 Mm)          |
| 2        | 100-2158 | 3    | Piston Ring ASM            |
| 2        | 100-2159 | 3    | Piston Ring ASM            |
| 3        | 100-1995 | 3    | Pin-Piston                 |
| 4        | 100-1835 | 6    | Cir-Cup, Piston Pin        |
| 5        | 100-1998 | 3    | Connecting Rod ASM         |
| 6        | 100-1997 | 3    | Bush-Pin, Piston           |
| 7        | 100-1999 | 6    | Bolt-Rod, Connecting       |
| 8        | 100-1942 | 3    | Crankpin-Metal (-0.2 Mm)   |
| 8        | 100-1943 | 3    | Crankpin-Metal (-0.4 Mm)   |
| 8        | 100-2000 | 3    | Crankpin-Metal (STD.)      |
| 9        | 100-2161 | 1    | Crankshaft ASM             |
| 10       | 100-2160 | 1    | Crankshaft-Comp.           |
| 11       | 100-1791 | 3    | Ball                       |
| 12       | 100-2054 | 1    | Sleeve-Crankshaft          |
| 13       | 100-1891 | 1    | Gear-Crankshaft            |
| 14       | 100-1752 | 1    | Key-Feather                |
| 15       | 100-1944 | 1    | Crankshaft-Metal (STD.)    |
| 15       | 100-1947 | 1    | Crankshaft-Metal (-0.2 Mm) |
| 15       | 100-1948 | 1    | Crankshaft-Metal (-0.4 Mm) |

| Ref. No. | Part No. | Qty. | Description                    |
|----------|----------|------|--------------------------------|
| 16       | 100-1945 | 2    | Crankshaft-Metal (-0.2 Mm Set) |
| 16       | 100-1946 | 2    | Crankshaft-Metal (-0.4 Mm Set) |
| 16       | 100-2033 | 2    | Crankshaft-Metal (STD. Set)    |
| 17       | 100-1870 | 1    | Crankshaft-Metal (-0.2 Mm Set) |
| 17       | 100-1871 | 1    | Crankshaft-Metal (-0.4 Mm Set) |
| 17       | 100-2032 | 1    | Crankshaft-Metal (STD. Set)    |
| 18       | 100-1836 | 2    | Metal-Side (STD.)              |
| 18       | 100-1838 | 2    | Metal-Side (+0.2 Mm)           |
| 18       | 100-1839 | 2    | Metal-Side (+0.4 Mm)           |
| 19       | 100-1837 | 2    | Metal-Side (STD.)              |
| 19       | 100-1840 | 2    | Metal-Side (+0.2 Mm)           |
| 19       | 100-1841 | 2    | Metal-Side (+0.4 Mm)           |
| 20       | 100-1890 | 1    | Collar-Crankshaft              |
| 21       | 100-1974 | 1    | Slinger-Oil                    |
| 22       | 100-2209 | 1    | O-Ring                         |
| 23       | 100-2164 | 1    | Kit-Piston                     |

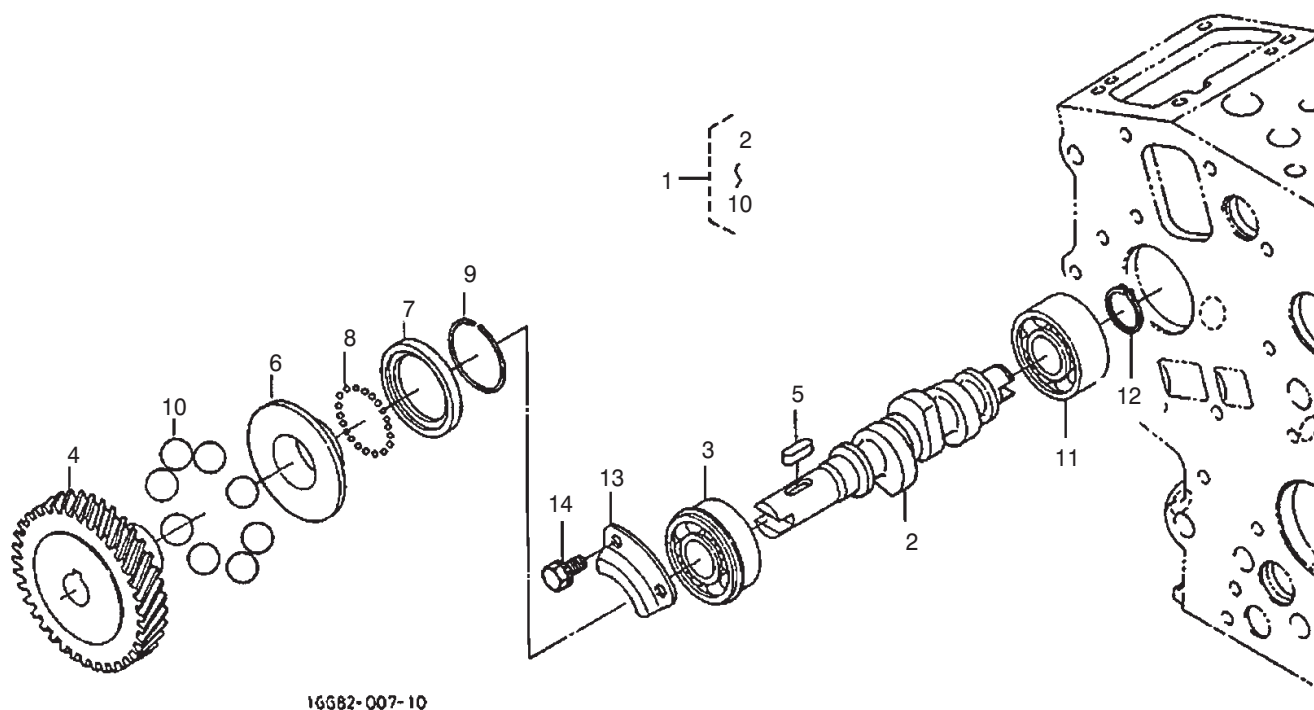


Sheet No.:11

## Flywheel Assembly

| Ref. No. | Part No. | Qty. | Description      |
|----------|----------|------|------------------|
| 1        | 100-2034 | 1    | Flywheel-Comp.   |
| 2        | 100-2156 | 1    | Gear-Ring        |
| 3        | 100-1930 | 1    | Bolt-Flywheel    |
| 4        | 100-2234 | 1    | Housing-Flywheel |
| 5        | 98-9359  | 10   | Bolt             |
| 6        | 100-2177 | 1    | Cover            |
| 7        | 98-7585  | 1    | Bolt             |
| 8        | 98-7660  | 1    | Washer-Plain     |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

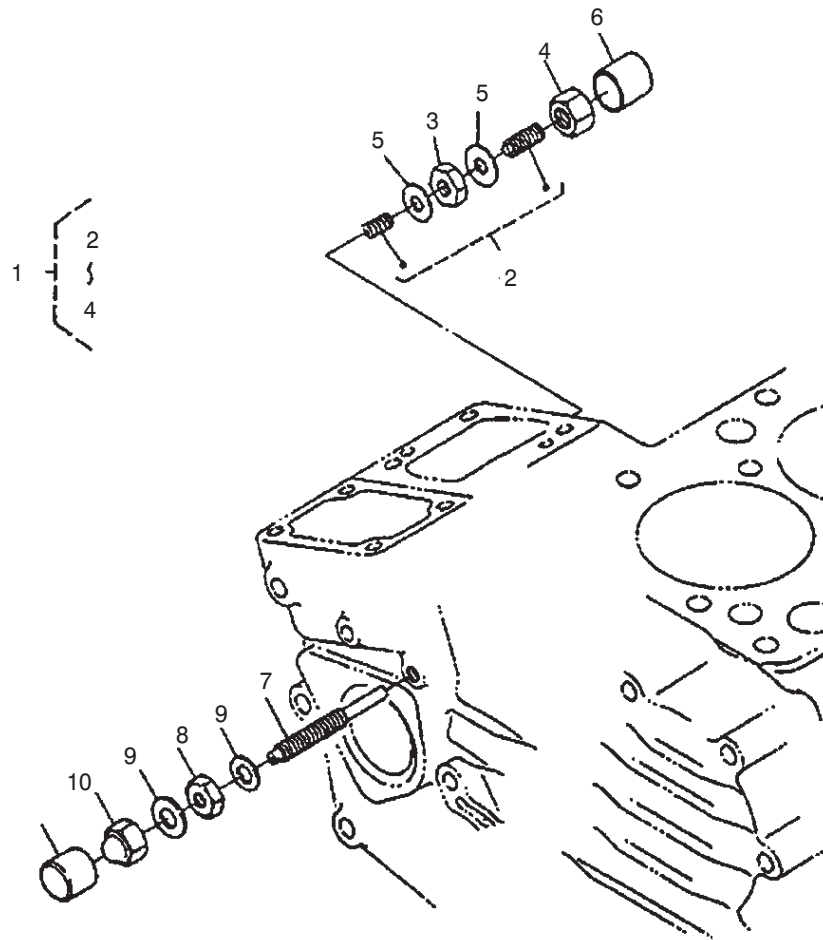


Sheet No.:12

## Fuel Camshaft Assembly

| Ref. No. | Part No. | Qty. | Description           |
|----------|----------|------|-----------------------|
| 1        | 100-2031 | 1    | Fuel Camshaft ASM     |
| 2        | 100-1965 | 1    | Camshaft              |
| 3        | 100-1795 | 1    | Bearing-Ball          |
| 4        | 100-2006 | 1    | Gear-Pump, Injection  |
| 5        | 100-1752 | 1    | Key-Feather           |
| 6        | 100-1903 | 1    | Sleeve-Governor       |
| 7        | 100-1904 | 1    | Case-Ball, Governor   |
| 8        | 100-1790 | 32   | Ball                  |
| 9        | 100-1843 | 1    | Cir-Clip, Gov. Sleeve |
| 10       | 100-1793 | 8    | Ball                  |
| 11       | 100-1794 | 1    | Bearing-Ball          |
| 12       | 100-1784 | 1    | Cir-Clip, External    |
| 13       | 100-1888 | 1    | Stopper-Fuel, C/Shaft |
| 14       | 98-9350  | 2    | Bolt                  |

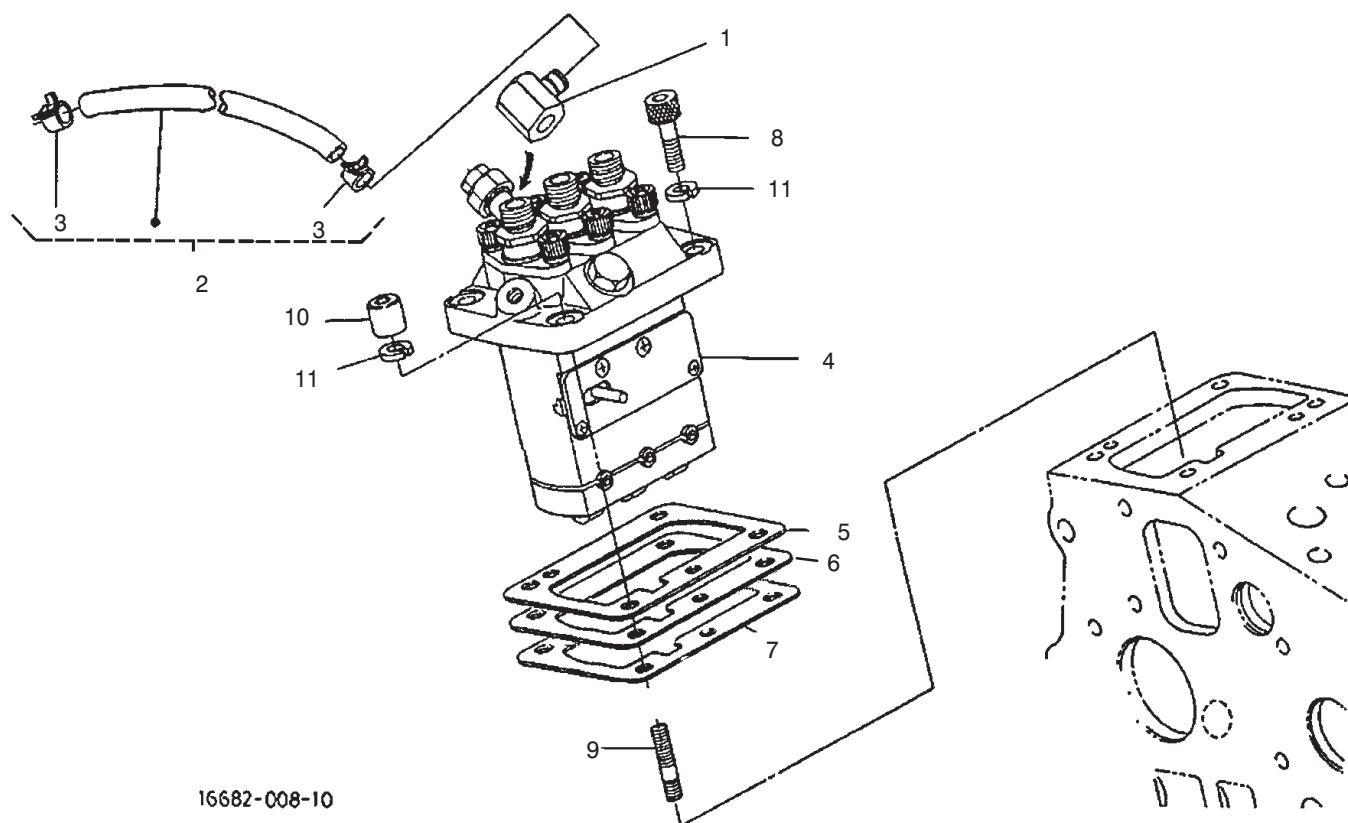
| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



Sheet No.:13

## Engine Stop Lever Assembly

| Ref. No. | Part No. | Qty. | Description        |
|----------|----------|------|--------------------|
| 1        | 100-1898 | 1    | Idle Appartus ASM  |
| 2        | 100-1899 | 1    | Adjusting Bolt ASM |
| 3        | 100-1846 | 1    | Nut                |
| 4        | 100-1901 | 1    | Nut-Cap            |
| 5        | 98-7428  | 2    | Gasket             |
| 6        | 100-1902 | 1    | Cap                |
| 7        | 100-1900 | 1    | Bolt-Adjusting     |
| 8        | 100-2175 | 1    | Nut-Lock           |
| 9        | 98-7654  | 2    | Gasket             |
| 10       | 98-9441  | 1    | Nut-Cap            |

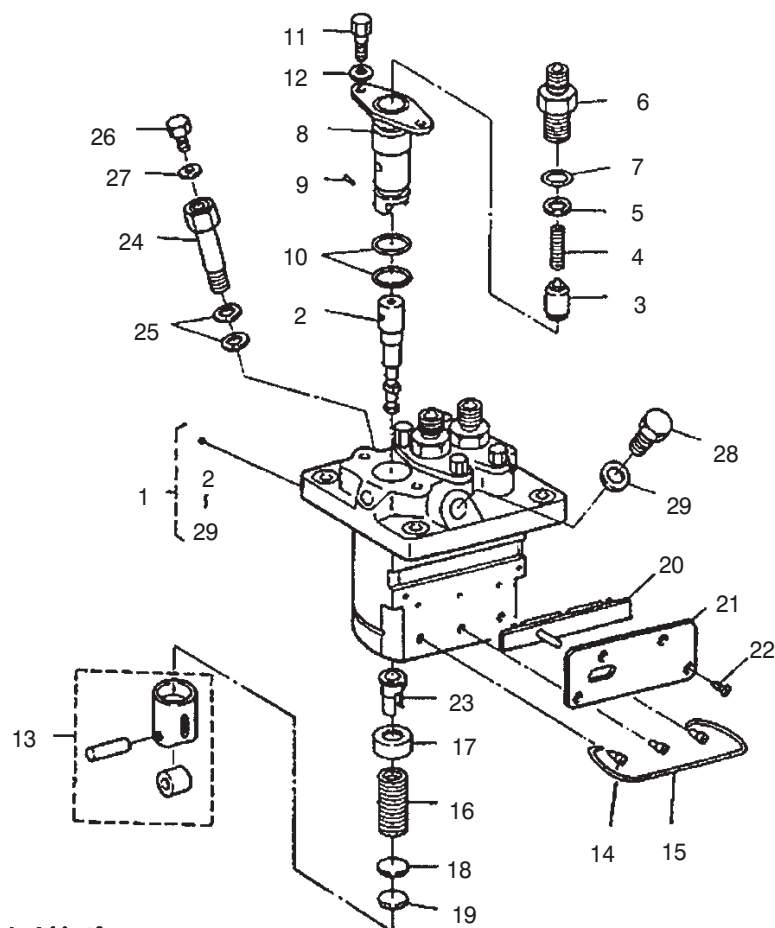


Sheet No.:14

## Injection Pump Assembly

| Ref. No. | Part No. | Qty. | Description                |
|----------|----------|------|----------------------------|
| 1        | 100-1928 | 1    | Joint-Eye                  |
| 2        | 100-1842 | 1    | Fuel Pipe ASM              |
| 3        | 100-2217 | 2    | Clip-Pipe                  |
| 4        | 100-1759 | 1    | Inj. Pump ASM              |
| 5        | 98-9456  | 1    | Shim (0.2mm)               |
| 6        | 98-9457  | 1    | Shim-Injection<br>(0.25mm) |
| 7        | 98-9458  | 1    | Shim-Injection<br>(0.30mm) |
| 8        | 98-9361  | 2    | Bolt-HSH                   |
| 9        | 98-9438  | 2    | Stud                       |
| 10       | 98-9440  | 2    | Nut-Cap                    |
| 11       | 98-9367  | 4    | Washer-Spring              |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

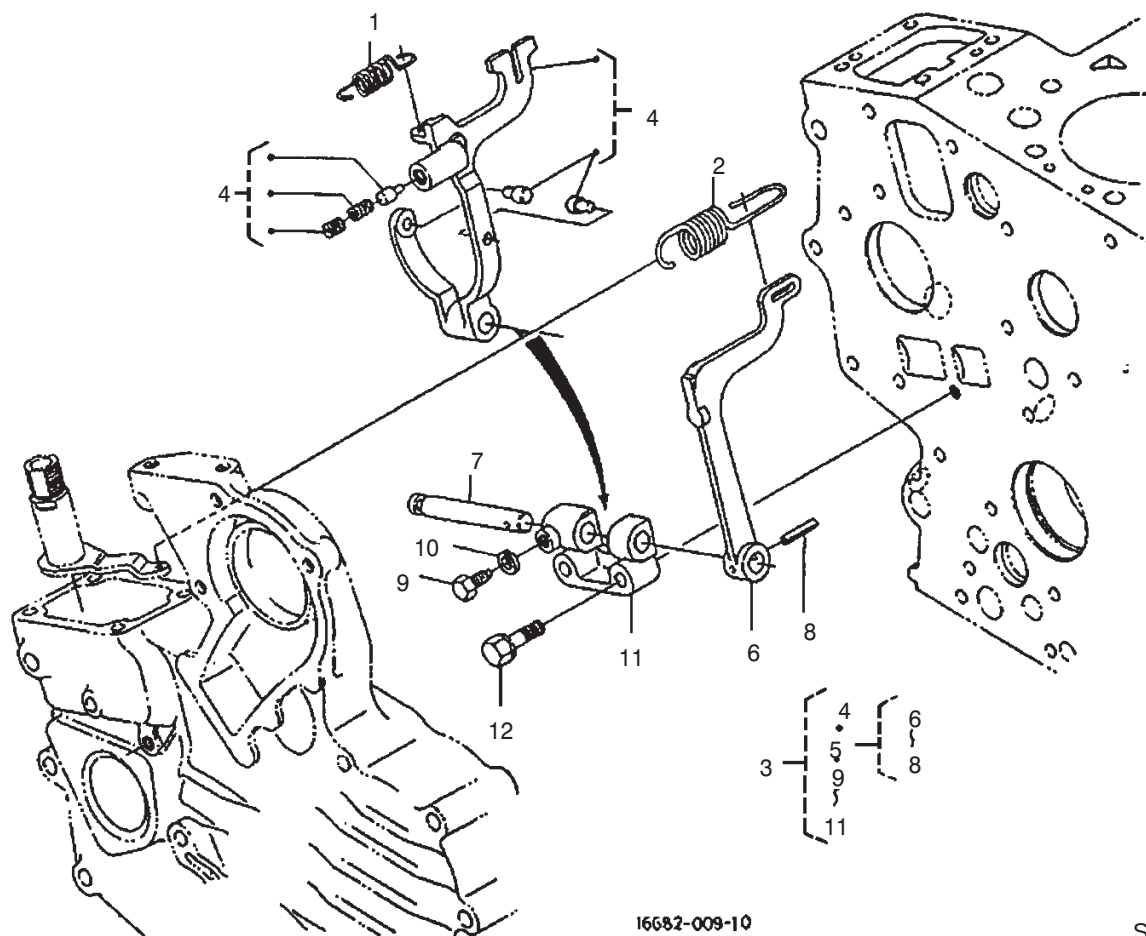


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Sheet No.:15

## Injection Pump (Complete Parts)

| Ref. No. | Part No. | Qty. | Description            | Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|------------------------|----------|----------|------|-------------|
| 1        | 100-1759 | 1    | Inj. Pump ASM          | 26       | 98-9430  | 1    | Screw       |
| 2        | 100-2005 | 3    | Plunger-Pump           | 27       | 98-9446  | 1    | Gasket      |
| 3        | 98-9421  | 3    | Valve-Delivery         | 28       | 100-1953 | 1    | Bolt        |
| 4        | 98-9424  | 3    | Spring-Valve, Delivery | 29       | 98-9451  | 1    | Gasket      |
| 5        | 98-9425  | 3    | Gasket-Valve, Delivery |          |          |      |             |
| 6        | 100-2007 | 3    | Holder-Valve, Deliv.   |          |          |      |             |
| 7        | 98-9447  | 3    | O-Ring                 |          |          |      |             |
| 8        | 98-9434  | 3    | Flange-Sleeve          |          |          |      |             |
| 9        | 98-9443  | 3    | Pin-Joint              |          |          |      |             |
| 10       | 100-1895 | 6    | O-Ring                 |          |          |      |             |
| 11       | 98-9452  | 6    | Screw                  |          |          |      |             |
| 12       | 100-1931 | 6    | Washer                 |          |          |      |             |
| 13       | 98-9422  | 3    | Tappet ASM             |          |          |      |             |
| 14       | 98-9426  | 3    | Pin-Guide, Tappet      |          |          |      |             |
| 15       | 98-9450  | 1    | Pin-Clamp              |          |          |      |             |
| 16       | 98-9428  | 3    | Spring-Plunger         |          |          |      |             |
| 17       | 98-9427  | 3    | Seat-Spring, Upper     |          |          |      |             |
| 18       | 98-9429  | 3    | Seat-Spring, Lower     |          |          |      |             |
| 19       | 98-9433  | 3    | Shim                   |          |          |      |             |
| 20       | 100-1949 | 1    | Rack-Control           |          |          |      |             |
| 21       | 100-1950 | 1    | Plate                  |          |          |      |             |
| 22       | 98-9442  | 4    | Screw                  |          |          |      |             |
| 23       | 98-9432  | 3    | Sleeve-Control         |          |          |      |             |
| 24       | 100-1896 | 1    | Screw-Hollow           |          |          |      |             |
| 25       | 98-9445  | 2    | Gasket                 |          |          |      |             |



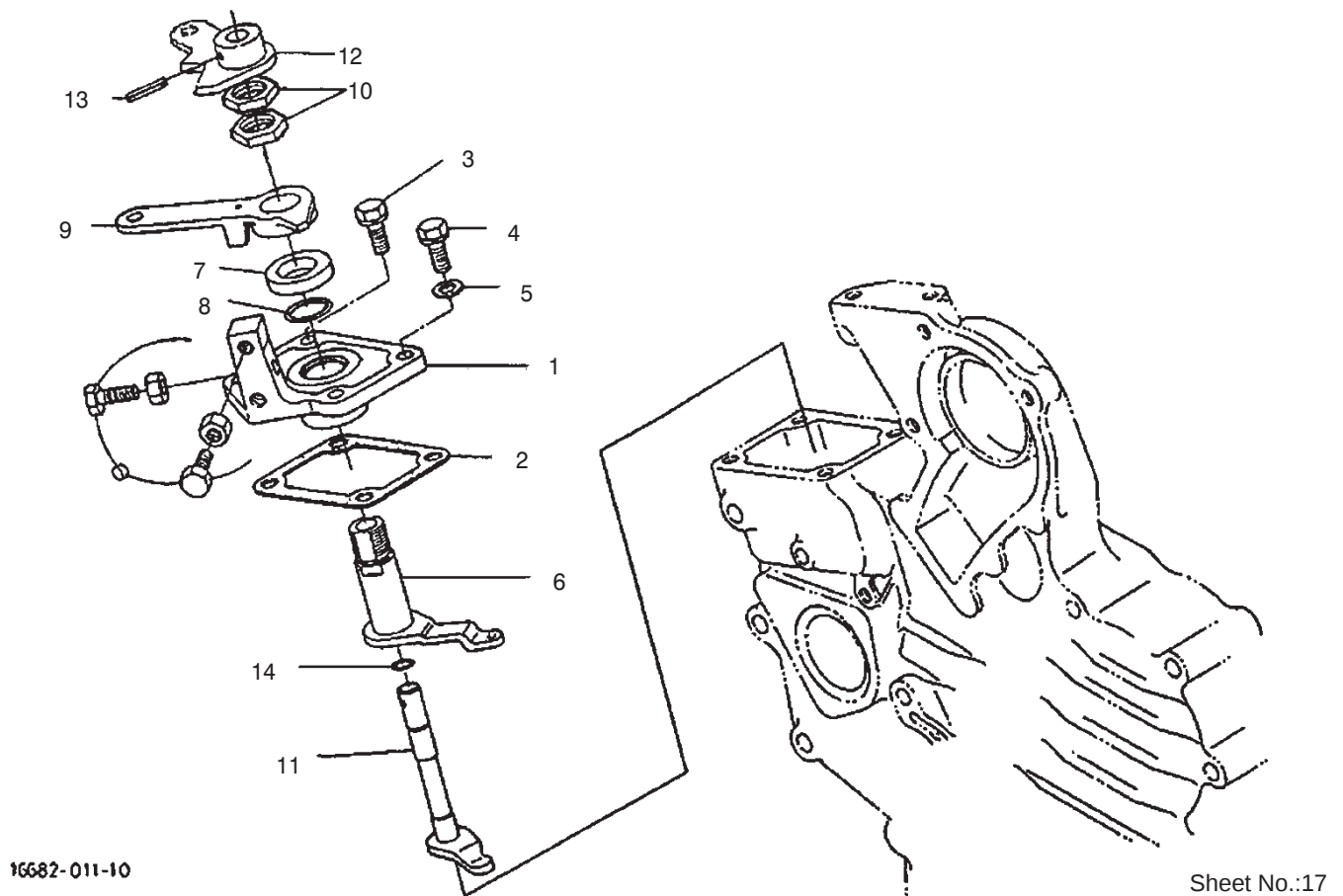
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Sheet No.:16

## Governor Assembly

| Ref. No. | Part No. | Qty. | Description        |
|----------|----------|------|--------------------|
| 1        | 100-1911 | 1    | Spring-Start       |
| 2        | 100-2059 | 1    | Spring-Governor    |
| 3        | 100-1981 | 1    | Fork Lever ASM     |
| 4        | 100-2241 | 1    | Lever-Fork, Comp.  |
| 5        | 100-1905 | 1    | Fork Lever ASM     |
| 6        | 100-1907 | 1    | Lever-Fork         |
| 7        | 100-1908 | 1    | Shaft-Lever, Fork  |
| 8        | 100-1751 | 1    | Pin-Spring         |
| 9        | 100-1845 | 1    | Bolt               |
| 10       | 100-2204 | 1    | Washer-Spring      |
| 11       | 100-1909 | 1    | Holder-Lever, Fork |
| 12       | 100-1763 | 2    | Bolt               |

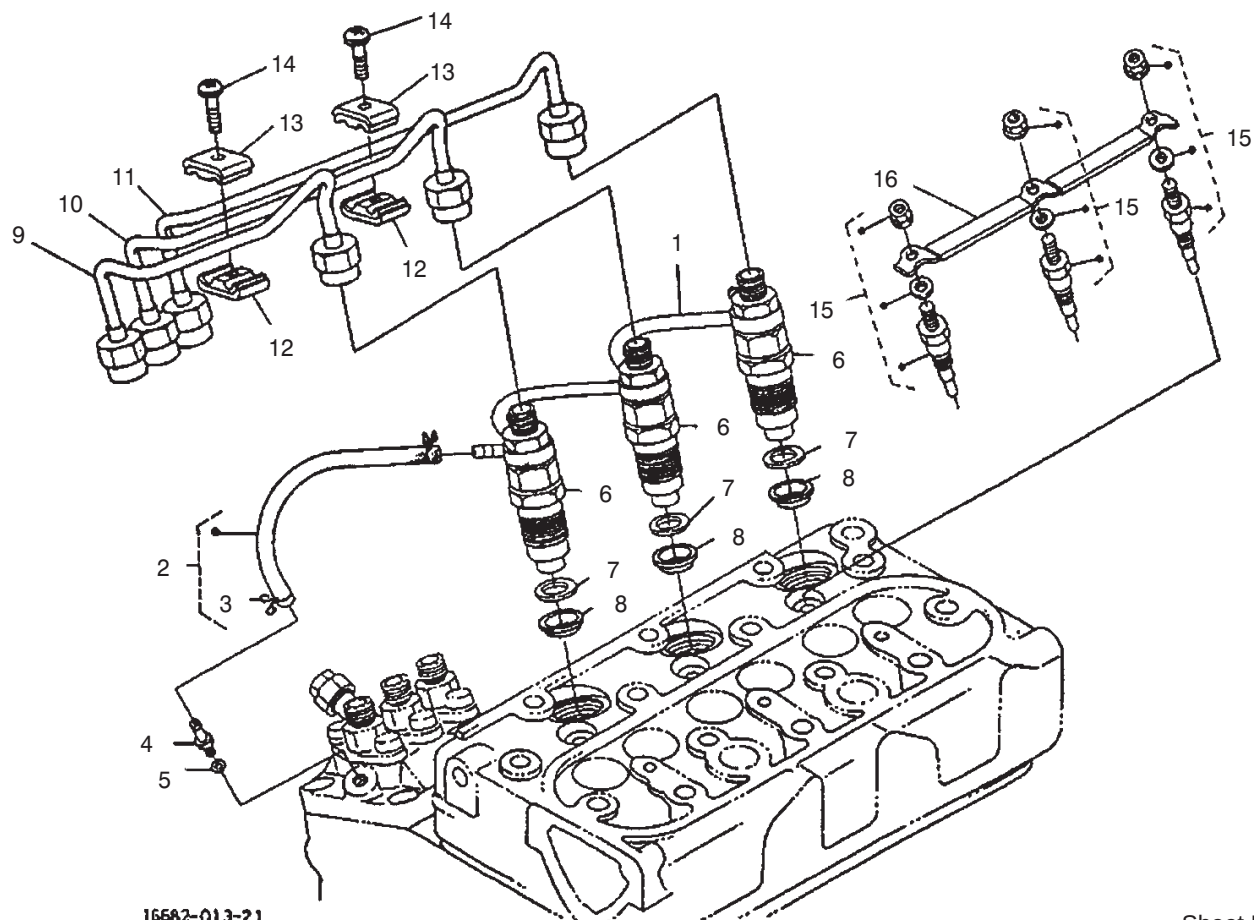
| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



## Speed Control Plate Assembly

| Ref. No. | Part No. | Qty. | Description        |
|----------|----------|------|--------------------|
| 1        | 100-1912 | 1    | Plate-Speed, Cont. |
| 2        | 100-1914 | 1    | Gasket             |
| 3        | 98-7605  | 2    | Bolt               |
| 4        | 100-1769 | 2    | Bolt               |
| 5        | 98-7654  | 2    | Gasket             |
| 6        | 100-2172 | 1    | Lever-Governor     |
| 7        | 100-1915 | 1    | Collar             |
| 8        | 100-2208 | 1    | O-Ring             |
| 9        | 100-1986 | 1    | Lever-Cont., Speed |
| 10       | 100-1925 | 2    | Nut                |
| 11       | 100-2050 | 1    | Shaft-Lever        |
| 12       | 100-2173 | 1    | Lever-Stop, Engine |
| 13       | 100-1751 | 1    | Pin-Spring         |
| 14       | 100-2207 | 1    | O-Ring             |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

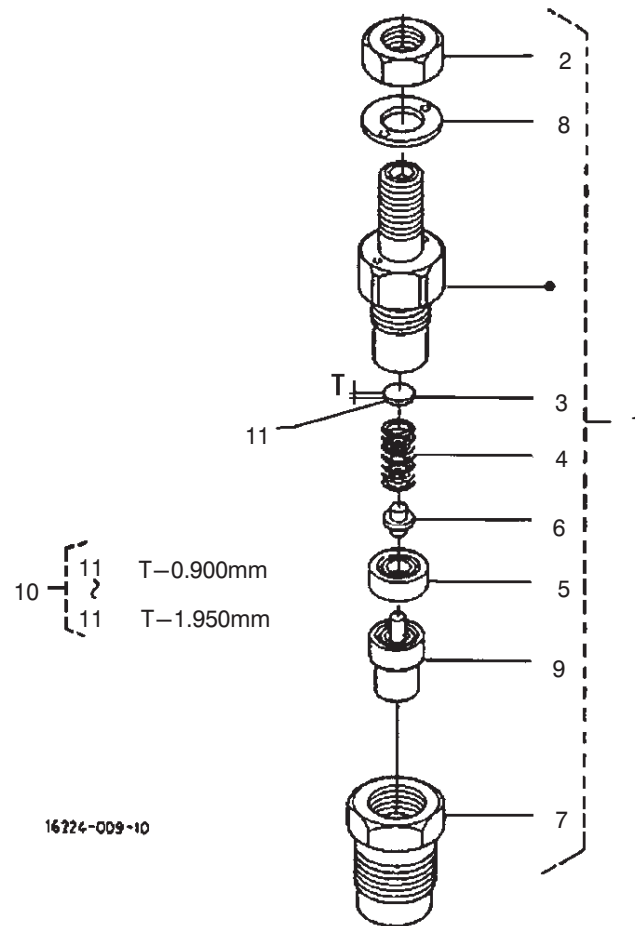


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## Nozzle Holder and Glow Plugs Assembly

| Ref. No. | Part No. | Qty. | Description        |
|----------|----------|------|--------------------|
| 1        | 100-1960 | 1    | Over Flow Pipe ASM |
| 2        | 98-9420  | 1    | Over Flow Pipe ASM |
| 2:1      | 98-7671  | 1    | Clip-Pipe          |
| 3        | 98-7671  | 2    | Clip-Pipe          |
| 4        | 98-9431  | 1    | Screw-Bleeder      |
| 5        | 98-7654  | 1    | Gasket             |
| 6        | 100-1758 | 3    | Nozzle Holder ASM  |
| 7        | 98-7676  | 3    | Gasket             |
| 8        | 98-7677  | 3    | Seal               |
| 9        | 100-2011 | 1    | Pipe-Injection     |
| 10       | 100-2013 | 1    | Pipe-Injection     |
| 11       | 100-2036 | 1    | Pipe-Injection     |
| 12       | 98-7682  | 2    | Clamp-Pipe         |
| 13       | 98-7683  | 2    | Clamp-Pipe         |
| 14       | 98-7684  | 2    | Screw W/Washer     |
| 15       | 100-1854 | 3    | Plug-Glow          |
| 16       | 100-2037 | 1    | Cord-Plug, Glow    |

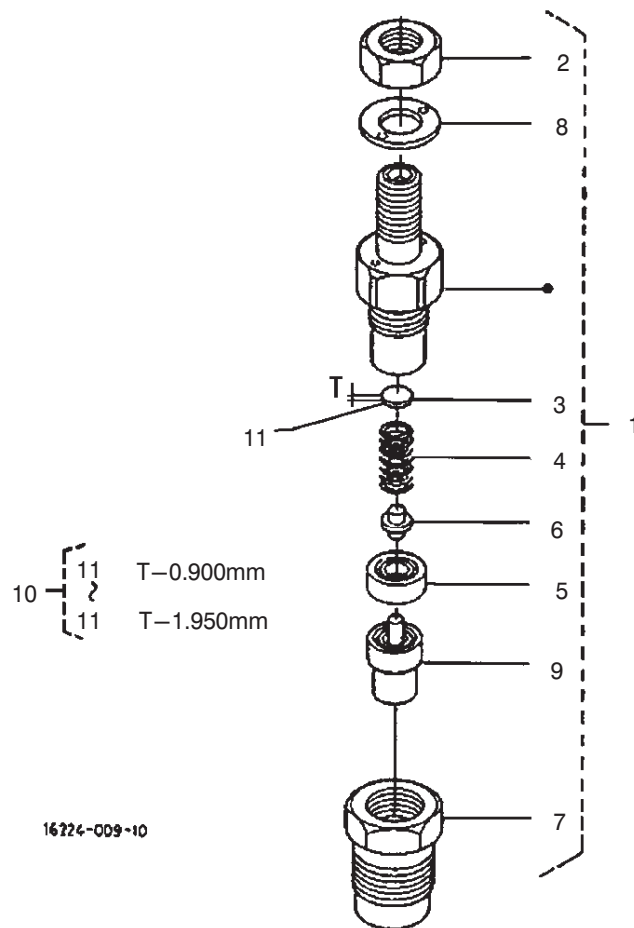
| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



Sheet No.:19

## Nozzle Holder (Complete Parts)

| Ref. No. | Part No. | Qty. | Description       | Ref. No. | Part No. | Qty. | Description      |
|----------|----------|------|-------------------|----------|----------|------|------------------|
| 1        | 100-1758 | 3    | Nozzle Holder ASM | 11       | 98-7856  | 3    | Washer-Adjusting |
| 2        | 98-7613  | 3    | Nut               | 11       | 98-7857  | 3    | Washer-Adjusting |
| 3        | 98-7642  | 3    | Washer-Adjusting  | 11       | 98-7858  | 3    | Washer-Adjusting |
| 4        | 98-7647  | 3    | Spring-Nozzle     | 11       | 98-7859  | 3    | Washer-Adjusting |
| 5        | 98-7665  | 3    | Piece-Distant     | 11       | 98-7860  | 3    | Washer-Adjusting |
| 6        | 98-7666  | 3    | Rod-Push          | 11       | 98-7861  | 3    | Washer-Adjusting |
| 7        | 100-2242 | 3    | Nut-Nozzle        | 11       | 98-7862  | 3    | Washer-Adjusting |
| 8        | 98-7668  | 3    | Washer            | 11       | 98-7863  | 3    | Washer-Adjusting |
| 9        | 100-2009 | 3    | Piece-Nozzle      | 11       | 98-7864  | 3    | Washer-Adjusting |
| 10       | 98-9448  | 3    | Adj Washer ASM    | 11       | 98-7865  | 3    | Washer-Adjusting |
| 11       | 98-7642  | 3    | Washer-Adjusting  | 11       | 98-7866  | 3    | Washer-Adjusting |
| 11       | 98-7841  | 3    | Washer-Adjusting  | 11       | 98-7867  | 3    | Washer-Adjusting |
| 11       | 98-7842  | 3    | Washer-Adjusting  | 11       | 98-7868  | 3    | Washer-Adjusting |
| 11       | 98-7843  | 3    | Washer-Adjusting  | 11       | 98-7869  | 3    | Washer-Adjusting |
| 11       | 98-7844  | 3    | Washer-Adjusting  | 11       | 98-7870  | 3    | Washer-Adjusting |
| 11       | 98-7845  | 3    | Washer-Adjusting  | 11       | 98-7871  | 3    | Washer-Adjusting |
| 11       | 98-7846  | 3    | Washer-Adjusting  | 11       | 98-7872  | 3    | Washer-Adjusting |
| 11       | 98-7847  | 3    | Washer-Adjusting  | 11       | 98-7873  | 3    | Washer-Adjusting |
| 11       | 98-7848  | 3    | Washer-Adjusting  | 11       | 98-7874  | 3    | Washer-Adjusting |
| 11       | 98-7849  | 3    | Washer-Adjusting  | 11       | 98-7875  | 3    | Washer-Adjusting |
| 11       | 98-7850  | 3    | Washer-Adjusting  | 11       | 98-7876  | 3    | Washer-Adjusting |
| 11       | 98-7851  | 3    | Washer-Adjusting  | 11       | 98-7877  | 3    | Washer-Adjusting |
| 11       | 98-7852  | 3    | Washer-Adjusting  | 11       | 98-7878  | 3    | Washer-Adjusting |
| 11       | 98-7853  | 3    | Washer-Adjusting  | 11       | 98-7879  | 3    | Washer-Adjusting |
| 11       | 98-7854  | 3    | Washer-Adjusting  | 11       | 98-7880  | 3    | Washer-Adjusting |
| 11       | 98-7855  | 3    | Washer-Adjusting  | 11       | 98-7881  | 3    | Washer-Adjusting |

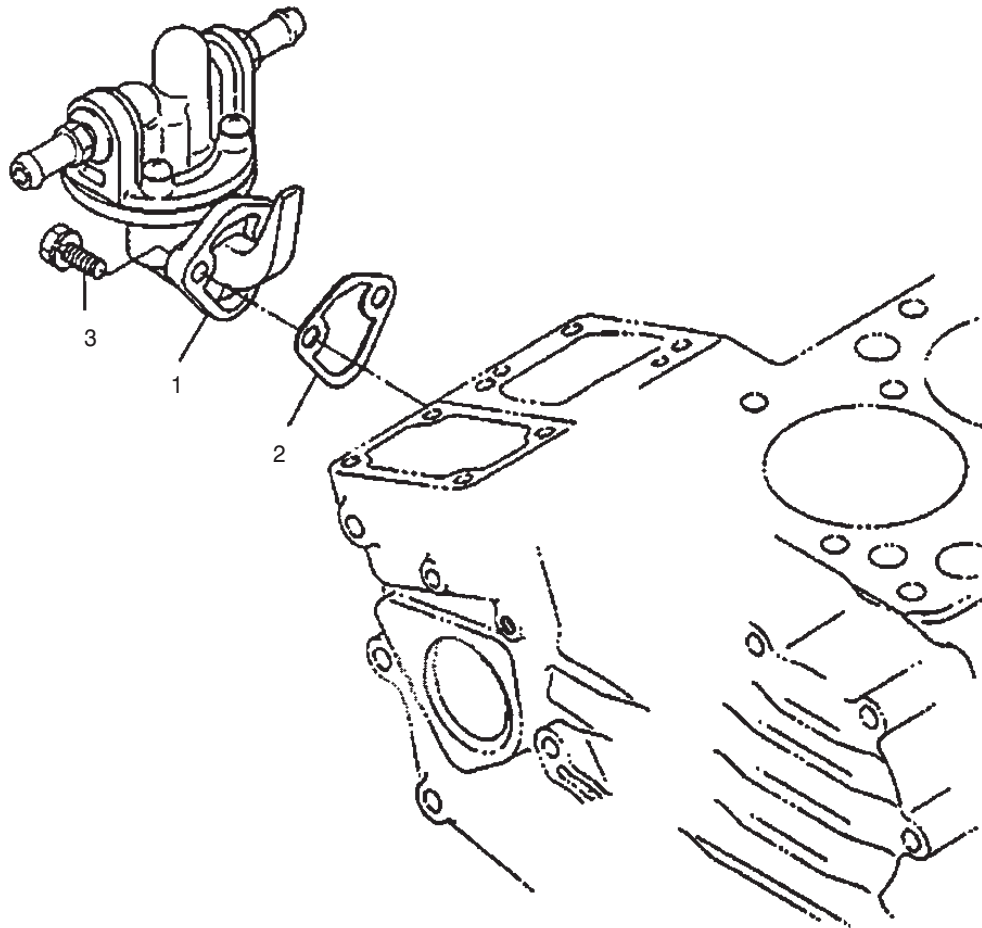


Sheet No.:19

## Nozzle Holder (Complete Parts Continued)

| Ref. No. | Part No. | Qty. | Description      |
|----------|----------|------|------------------|
| 11       | 98-7882  | 3    | Washer-Adjusting |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

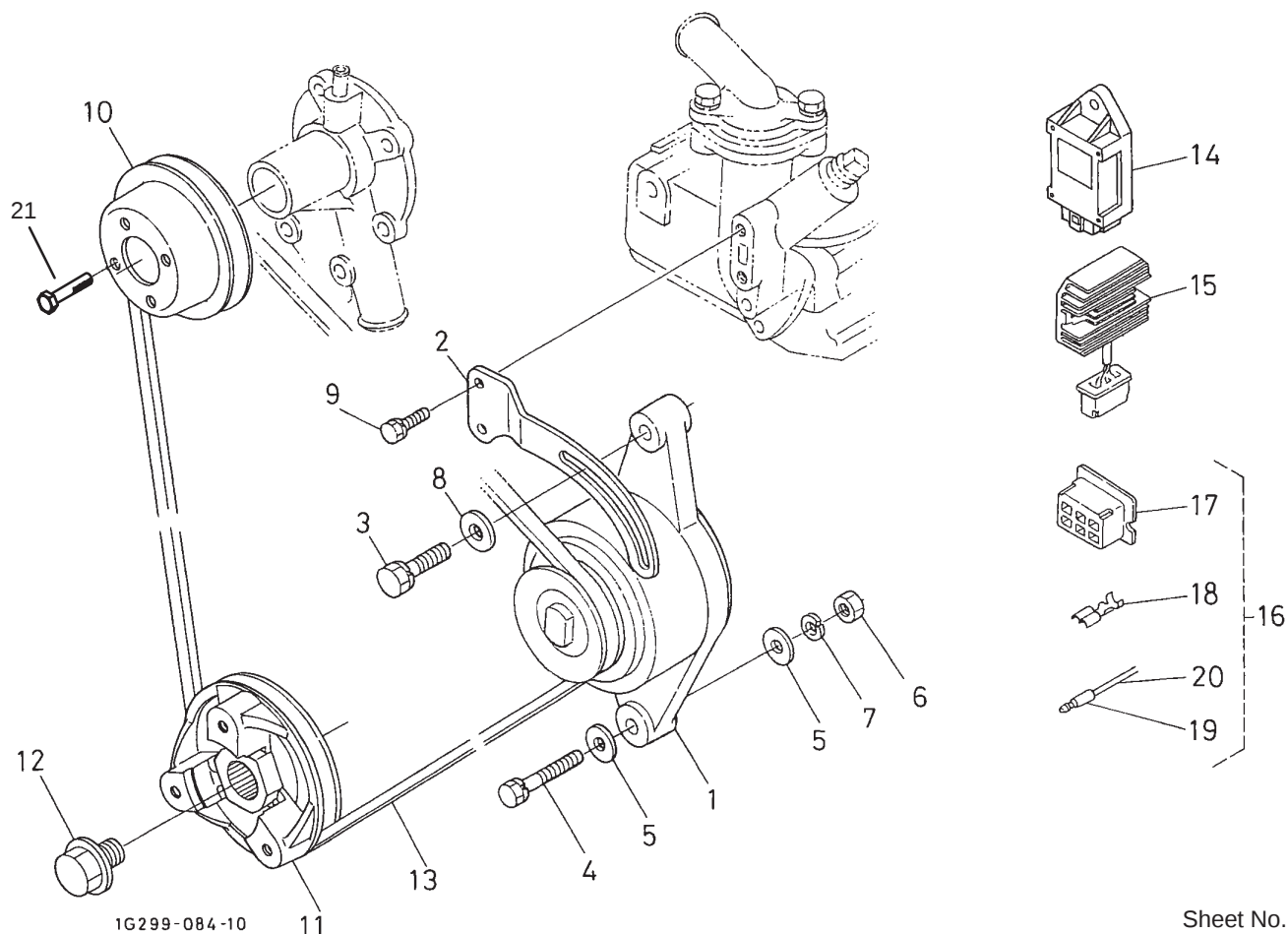


Sheet No.:20

## Fuel Pump (Mechanical)

| Ref. No. | Part No. | Qty. | Description       |
|----------|----------|------|-------------------|
| 1        | 100-2232 | 1    | Fuel Pump ASM     |
| 2        | 98-9636  | 1    | Gasket-Pump, Fuel |
| 3        | 98-7692  | 2    | Bolt              |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

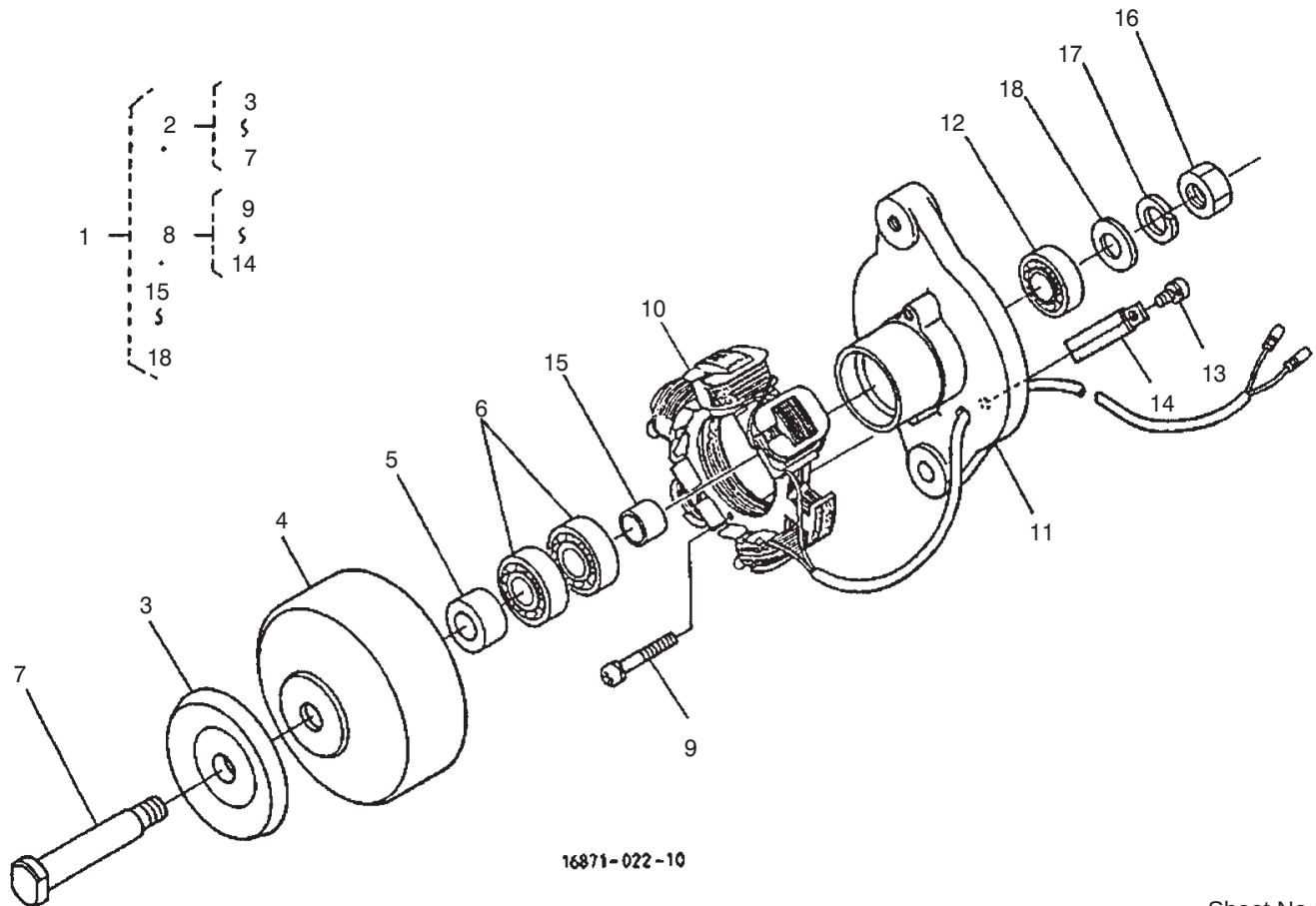


Sheet No.:21

## Dynamo and Pulley Assembly

| Ref. No. | Part No. | Qty. | Description       |
|----------|----------|------|-------------------|
| 1        | 100-2168 | 1    | Dynamo ASM        |
| 2        | 100-2214 | 1    | Stay-Dynamo       |
| 3        | 98-7697  | 1    | Bolt              |
| 4        | 100-1771 | 1    | Bolt              |
| 5        | 98-7660  | 2    | Washer-Plain      |
| 6        | 98-7739  | 1    | Nut               |
| 7        | 98-7535  | 1    | Washer-Spring     |
| 8        | 100-1782 | 1    | Washer-Plain      |
| 9        | 98-7692  | 2    | Bolt              |
| 10       | 100-1921 | 1    | Pulley-Fan        |
| 11       | 100-2039 | 1    | Pulley-Drive, Fan |
| 12       | 100-1978 | 1    | Bolt              |
| 13       | 100-1979 | 1    | V-Belt            |
| 14       | 98-7611  | 1    | Controller-Glow   |
| 15       | 100-2057 | 1    | Regulator ASM     |
| 16       | 100-2058 | 1    | Coupler ASM       |
| 17       | 100-2056 | 1    | Connector         |
| 18       | 98-9699  | 6    | Terminal          |
| 19       | 98-9701  | 2    | Terminal          |
| 20       | 98-9702  | 2    | Sleeve            |
| 21       | 100-1773 | 4    | Bolt-Flange       |

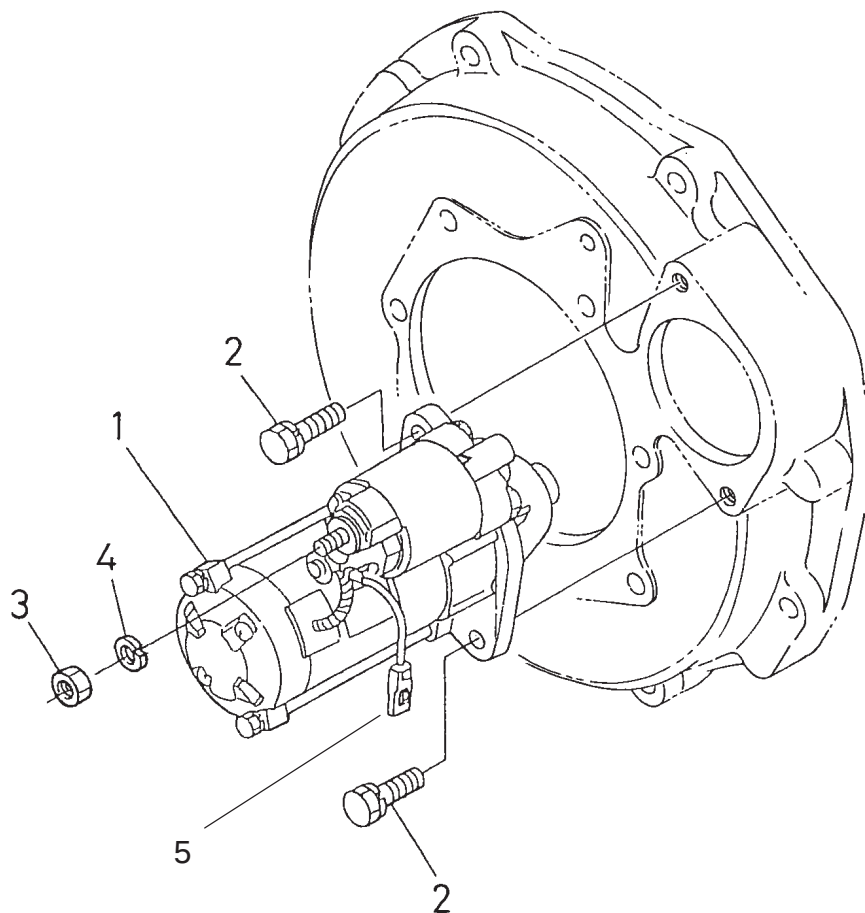
| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



Sheet No.:22

## Dynamo (Complete Parts)

| Ref. No. | Part No. | Qty. | Description       | Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------------|----------|----------|------|-------------|
| 1        | 100-2168 | 1    | Dynamo ASM        |          |          |      |             |
| 2        | 100-1862 | 1    | Rotor-Comp.       |          |          |      |             |
| 3        | 100-2228 | 1    | Pulley            |          |          |      |             |
| 4        | 100-1860 | 1    | Rotor             |          |          |      |             |
| 5        | 100-2184 | 1    | Collar            |          |          |      |             |
| 6        | 100-1756 | 2    | Bearing-Ball      |          |          |      |             |
| 7        | 100-1867 | 1    | Shaft-Fan         |          |          |      |             |
| 8        | 100-1866 | 1    | Stator-Comp.      |          |          |      |             |
| 9        | 100-1848 | 2    | Screw-Head, Round |          |          |      |             |
| 10       | 100-1865 | 1    | Stator            |          |          |      |             |
| 11       | 100-1861 | 1    | Plate             |          |          |      |             |
| 12       | 100-1756 | 1    | Bearing-Ball      |          |          |      |             |
| 13       | 100-1868 | 1    | Screw-Head, Round |          |          |      |             |
| 14       | 100-1864 | 1    | Clamp-Cord        |          |          |      |             |
| 15       | 100-1844 | 1    | Collar            |          |          |      |             |
| 16       | 100-1847 | 1    | Nut               |          |          |      |             |
| 17       | 100-1850 | 1    | Washer-Spring     |          |          |      |             |
| 18       | 100-1849 | 1    | Washer-Plain      |          |          |      |             |



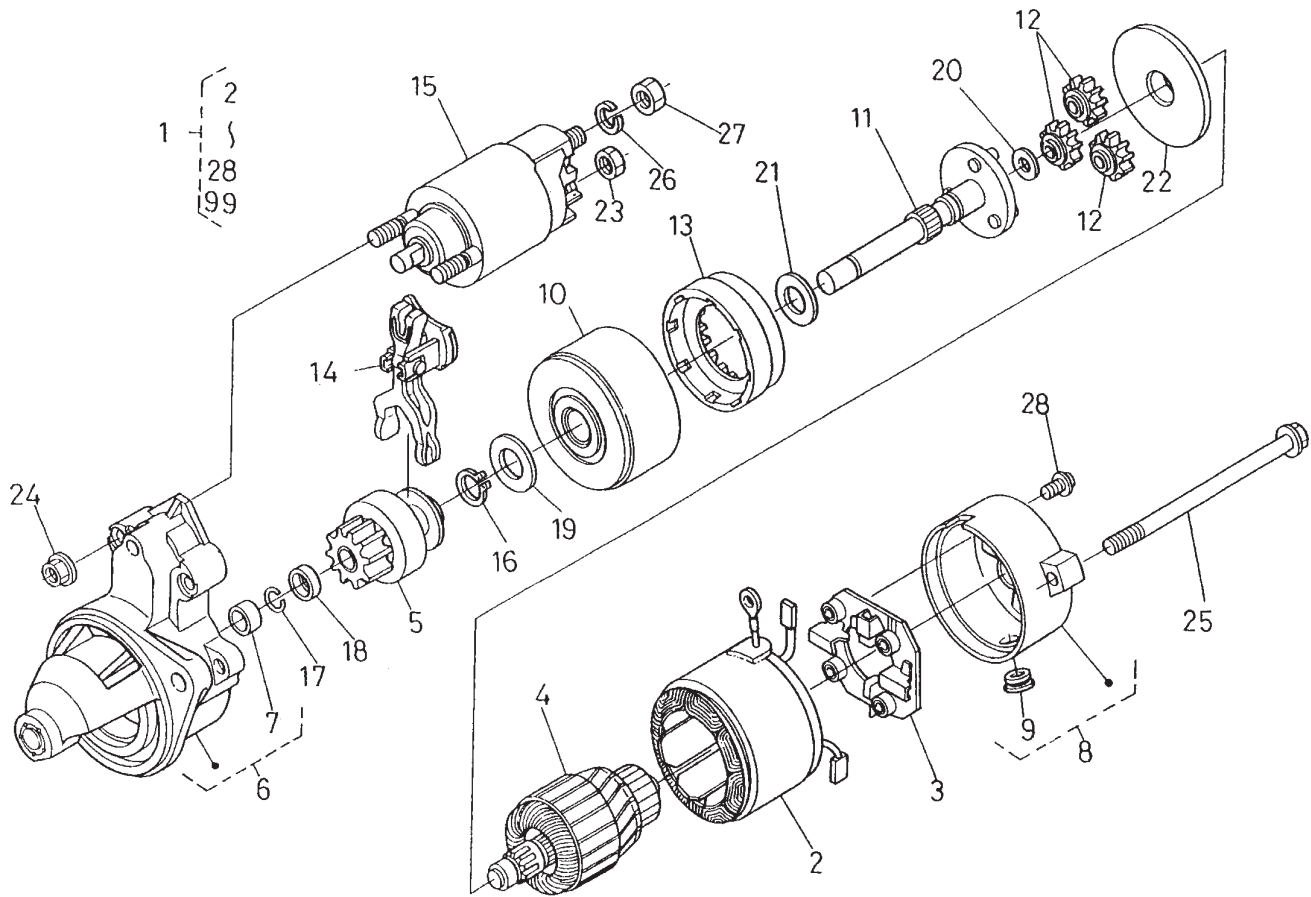
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Sheet No.:23

## Starter Assembly

| Ref. No. | Part No. | Qty. | Description   |
|----------|----------|------|---------------|
| 1        | 100-2179 | 1    | Starter ASM   |
| 2        | 98-7438  | 2    | Bolt          |
| 3        | 98-7739  | 1    | Nut           |
| 4        | 98-7535  | 1    | Washer-Spring |
| 5        | 99-1434  | 1    | Wire-Lead     |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



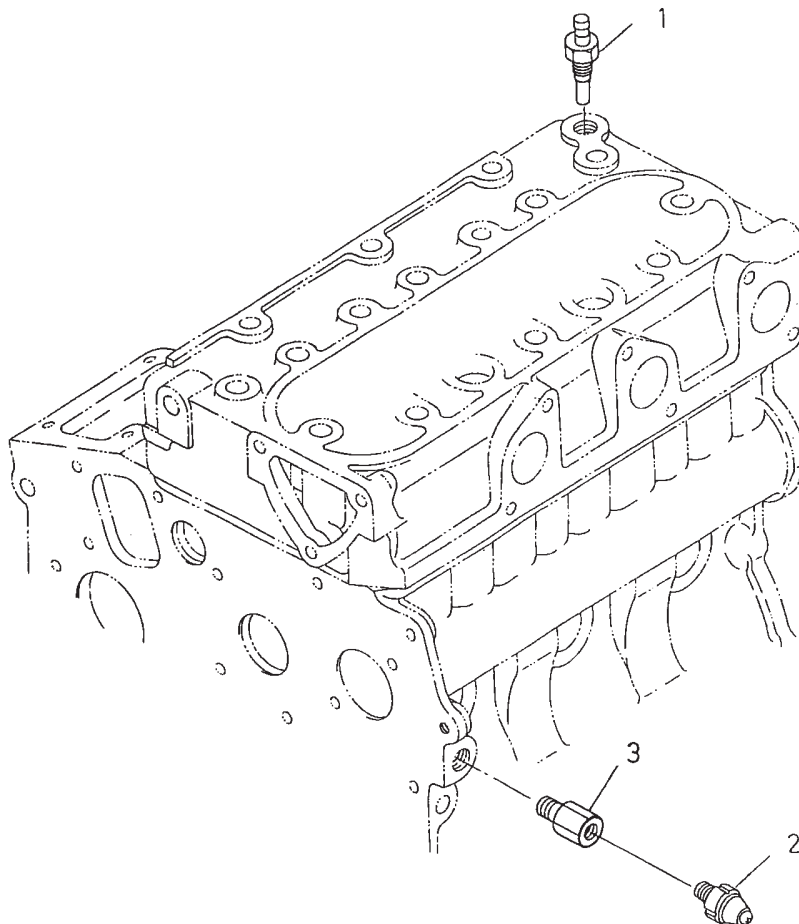
67992-001-10

Sheet No.:24

## Starter (Complete Parts)

| Ref. No. | Part No. | Qty. | Description         |
|----------|----------|------|---------------------|
| 1        | 100-2179 | 1    | Starter ASM         |
| 2        | 100-2181 | 1    | Starter Yoke ASM    |
| 3        | 100-2222 | 1    | Holder ASM          |
| 4        | 100-2182 | 1    | Armature ASM        |
| 5        | 100-2185 | 1    | Starter Clutch ASM  |
| 6        | 100-2180 | 1    | Starter Housing ASM |
| 7        | 100-2183 | 1    | Bearing             |
| 8        | 100-2186 | 1    | Frame ASM           |
| 9        | 100-2213 | 1    | Cover               |
| 10       | 100-2223 | 1    | Bearing ASM         |
| 11       | 100-2187 | 1    | Starter Shaft ASM   |
| 12       | 100-2220 | 3    | Gear                |
| 13       | 100-2221 | 1    | Gear                |
| 14       | 100-2218 | 1    | Lever               |
| 15       | 100-2211 | 1    | Magnetic Switch ASM |
| 16       | 100-2219 | 1    | Ring-Snap           |
| 17       | 100-2212 | 1    | Ring-Snap           |
| 18       | 100-2216 | 1    | Collar              |
| 19       | 100-2224 | 1    | Washer-Plain        |
| 20       | 100-2225 | 1    | Washer-Plain        |
| 21       | 100-2226 | 1    | Washer-Plain        |
| 22       | 100-2227 | 1    | Plate               |
| 23       | 100-2243 | 1    | Nut-Hexagon         |
| 24       | 100-1813 | 2    | Nut                 |
| 25       | 100-2210 | 2    | Bolt-Through        |
| 26       | 100-2215 | 1    | Washer-Spring       |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
| 27       | 100-2171 | 1    | Nut-Hexagon |
| 28       | 100-2188 | 2    | Screw       |
| 99       | 99-1434  | 1    | Wire-Lead   |



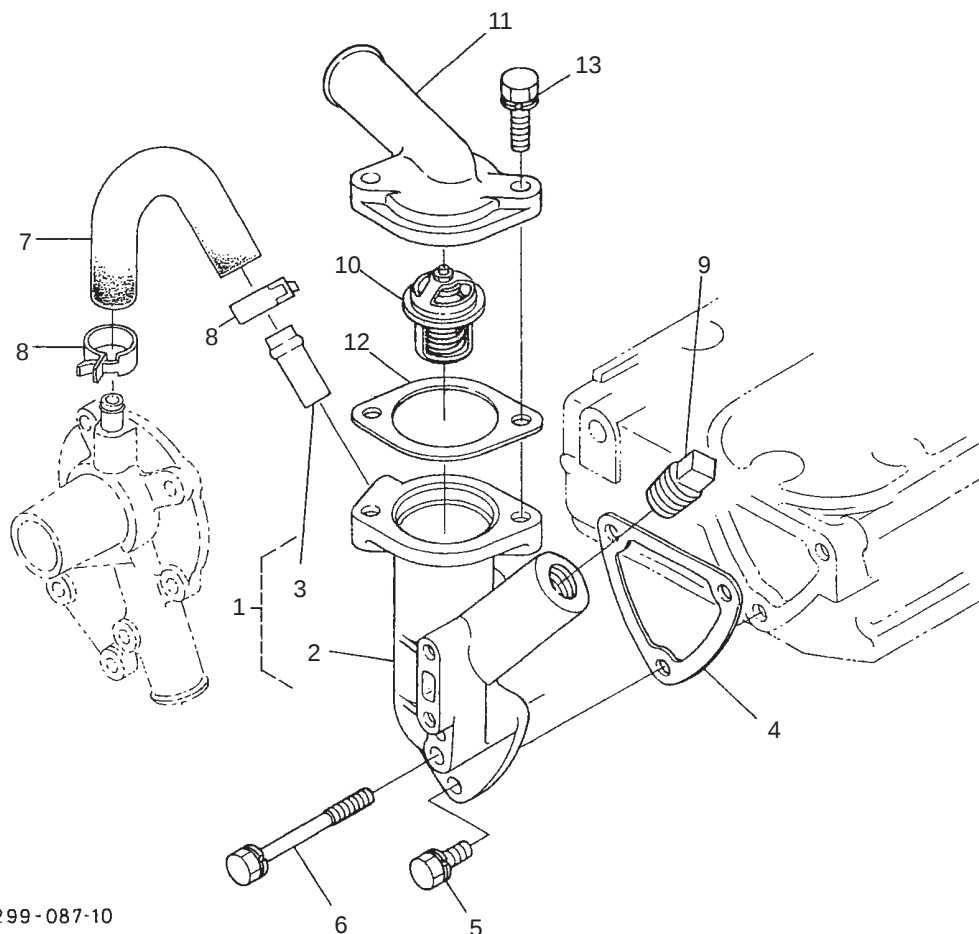
1G299-086-10

Sheet No.:25

## Oil Switch and Thermoswitch Assembly

| Ref. No. | Part No. | Qty. | Description        |
|----------|----------|------|--------------------|
| 1        | 99-3582  | 1    | Thermoswitch       |
| 2        | 98-7764  | 1    | Switch-Oil         |
| 3        | 100-2170 | 1    | Holder-Signal, Oil |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



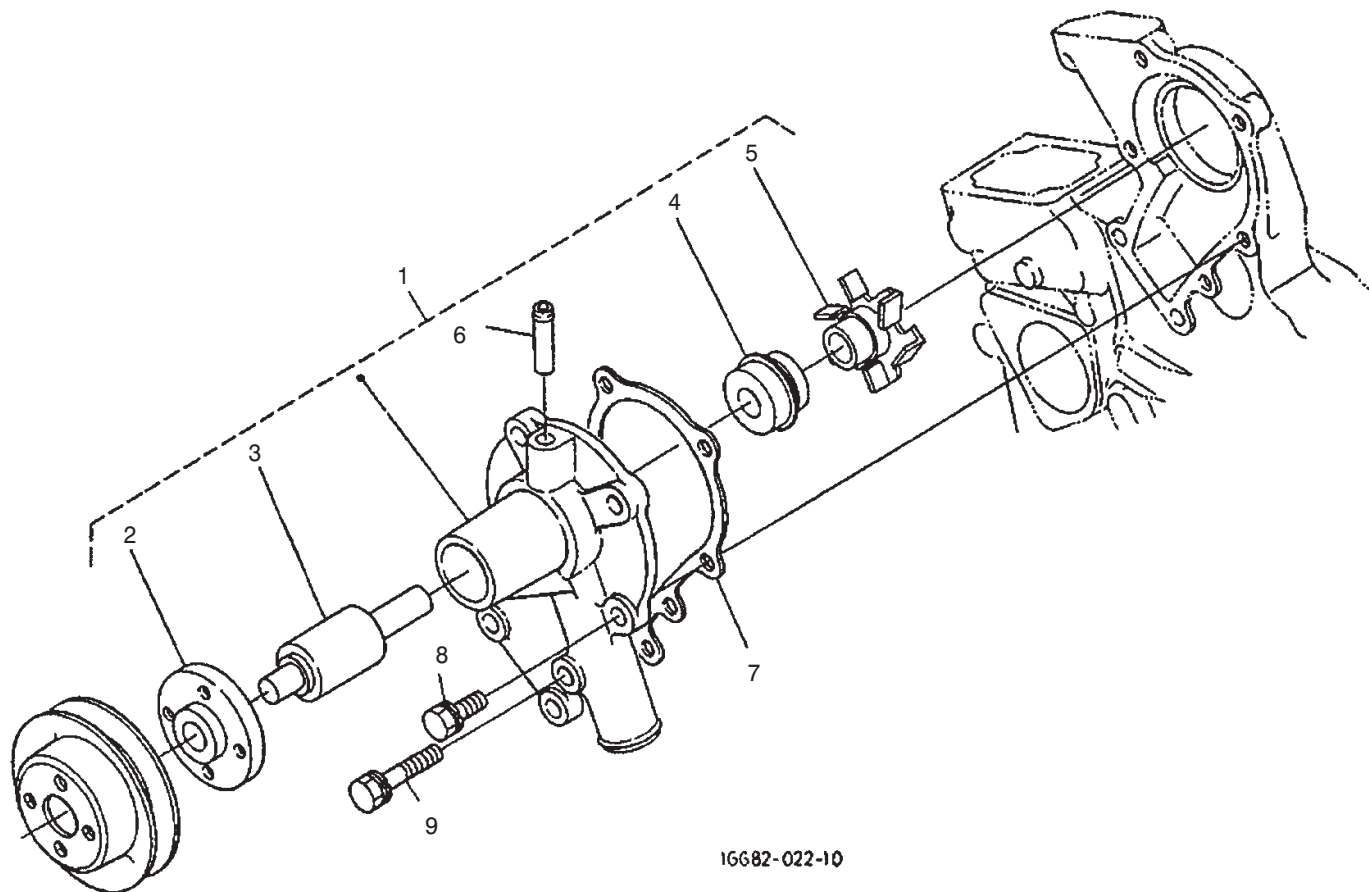
1G299-087-10

Sheet No.:26

## Water Flange and Thermostat Assembly

| Ref. No. | Part No. | Qty. | Description          |
|----------|----------|------|----------------------|
| 1        | 100-2165 | 1    | Flange-Water, Comp.  |
| 2        | 100-2166 | 1    | Flang-Water          |
| 3        | 98-9580  | 1    | Pipe-Return, Water   |
| 4        | 100-1919 | 1    | Gasket-Flange, Water |
| 5        | 98-7692  | 2    | Bolt                 |
| 6        | 100-2201 | 1    | Bolt                 |
| 7        | 100-2017 | 1    | Pipe-Return, Water   |
| 8        | 98-9579  | 2    | Band-Pipe            |
| 9        | 100-2169 | 1    | Plug                 |
| 10       | 100-2053 | 1    | Thermostat ASM       |
| 11       | 100-2231 | 1    | Cover-Thermostat     |
| 12       | 100-2157 | 1    | Gasket-Thermostat    |
| 13       | 98-9353  | 2    | Bolt                 |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

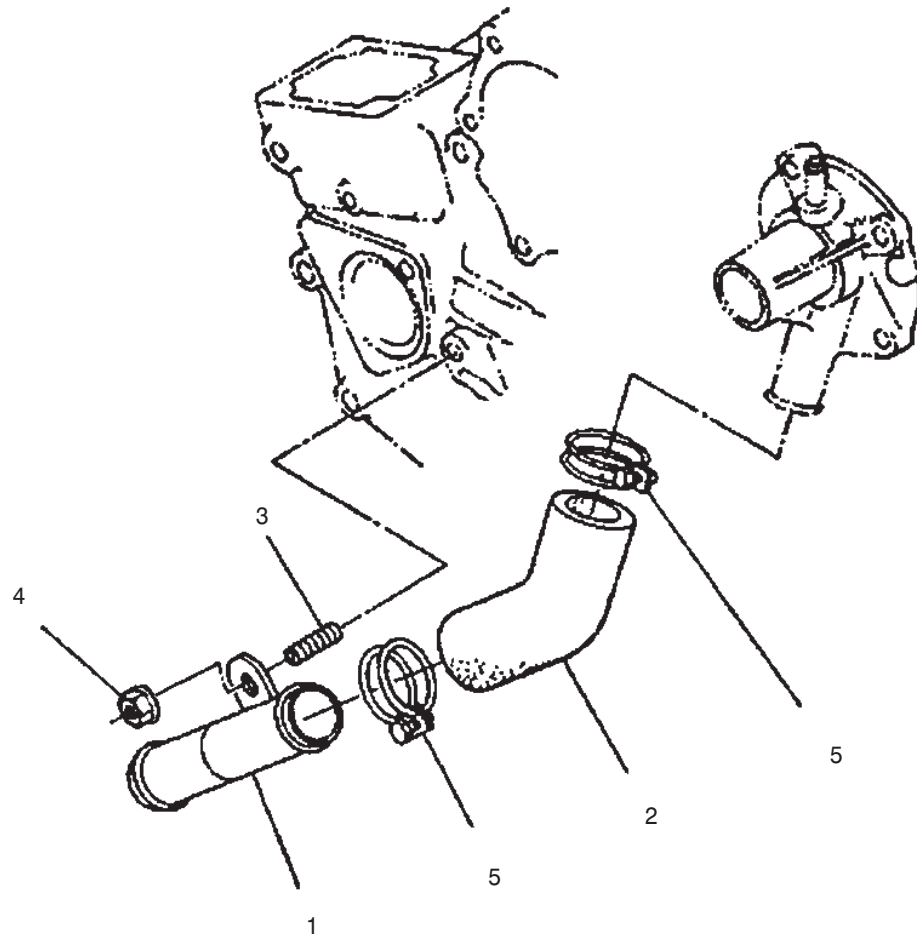


Sheet No.:27

# Water Pump Assembly

| Ref. No. | Part No. | Qty. | Description          |
|----------|----------|------|----------------------|
| 1        | 100-2065 | 1    | Water Pump ASM       |
| 2        | 100-1933 | 1    | Flange-Pump, Water   |
| 3        | 100-1934 | 1    | Bearing-Ball         |
| 4        | 99-3518  | 1    | Water Pump Seal ASM  |
| 5        | 100-2067 | 1    | Impeller-Pump, Water |
| 6        | 100-1932 | 1    | Pipe-Return, Water   |
| 7        | 100-1976 | 1    | Gasket-Pump, Water   |
| 8        | 100-1750 | 4    | Bolt                 |
| 9        | 100-1764 | 1    | Bolt                 |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

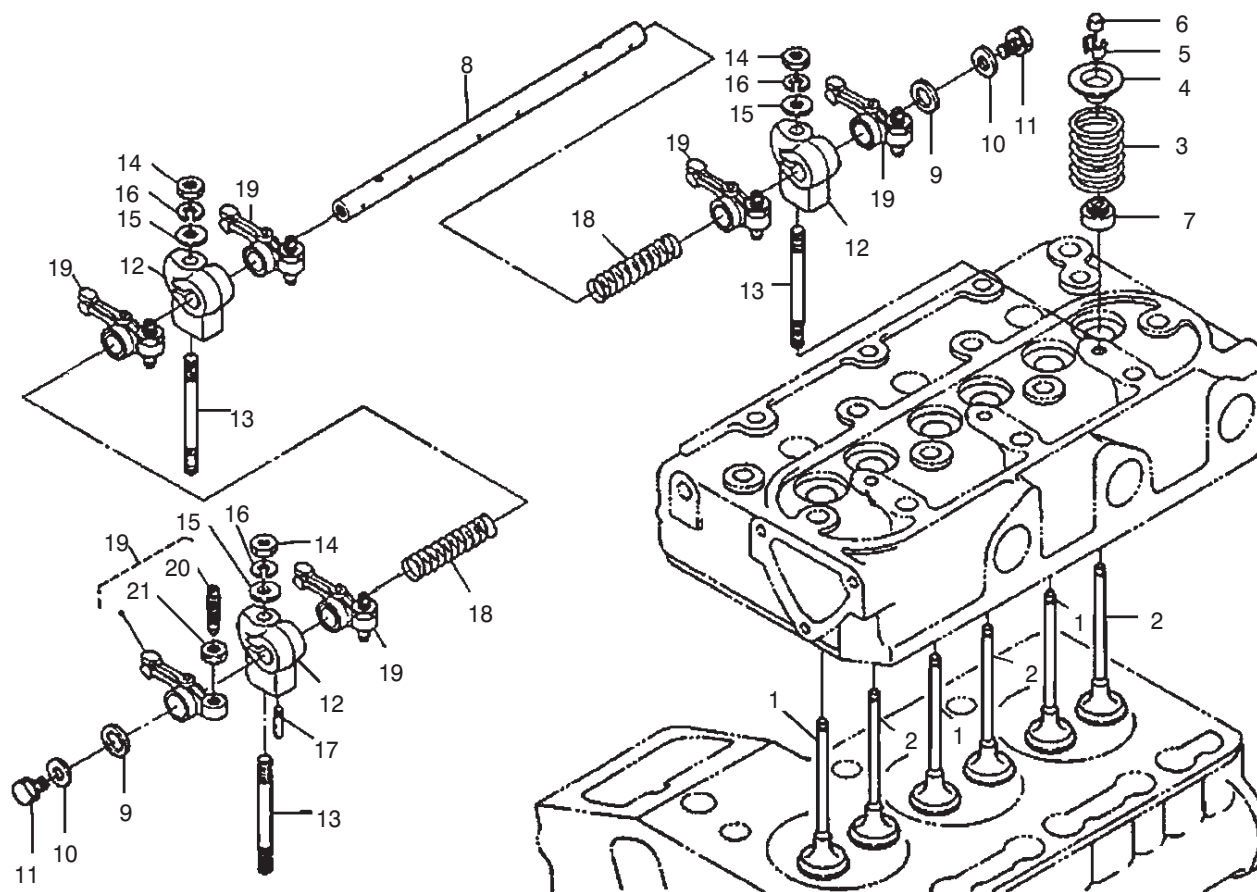


Sheet No.:28

## Water Pipe Assembly

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
| 1        | 100-1918 | 1    | Pipe-Water  |
| 2        | 100-1975 | 1    | Pipe-Water  |
| 3        | 100-1924 | 1    | Stud        |
| 4        | 100-2203 | 1    | Nut-Flange  |
| 5        | 100-1753 | 2    | Clamp-Hose  |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



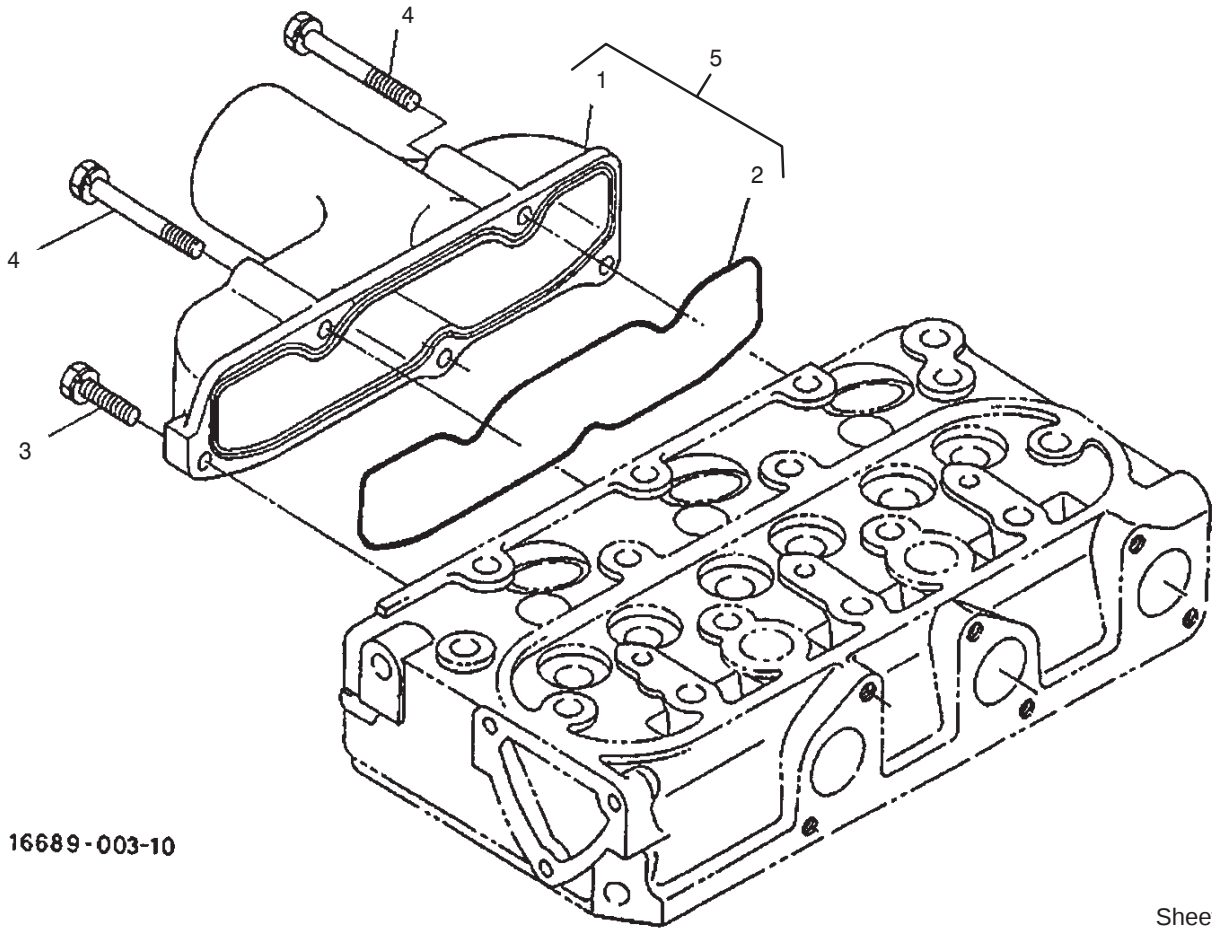
12691-026-10

Sheet No.:29

## Valve and Rocker Arm Assembly

| Ref. No. | Part No. | Qty. | Description          |
|----------|----------|------|----------------------|
| 1        | 100-1821 | 3    | Valve-Inlet          |
| 2        | 100-1822 | 3    | Valve-Exhaust        |
| 3        | 100-1823 | 6    | Spring-Valve         |
| 4        | 100-1825 | 6    | Retainer-Valve, Sp.  |
| 5        | 100-1826 | 6    | Collet-Spring, Valve |
| 6        | 100-2155 | 6    | Cap-Valve            |
| 7        | 100-1797 | 6    | Seal-Stem, Valve     |
| 8        | 100-2237 | 1    | Shaft-Arm, Rocker    |
| 9        | 100-2044 | 2    | Washer               |
| 10       | 100-1927 | 2    | Washer-Plain         |
| 11       | 100-1762 | 2    | Bolt                 |
| 12       | 100-1886 | 3    | Bracket-Arm, Rocker  |
| 13       | 100-1829 | 3    | Stud                 |
| 14       | 98-7572  | 3    | Nut                  |
| 15       | 98-7648  | 3    | Washer-Plain         |
| 16       | 98-9367  | 3    | Washer-Spring        |
| 17       | 98-7602  | 1    | Pin-Spring           |
| 18       | 100-1828 | 2    | Spring-Arm, Rocker   |
| 19       | 100-1884 | 6    | Rocker Arm ASM       |
| 20       | 100-1885 | 6    | Screw-Adjusting      |
| 21       | 100-1827 | 6    | Nut                  |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |

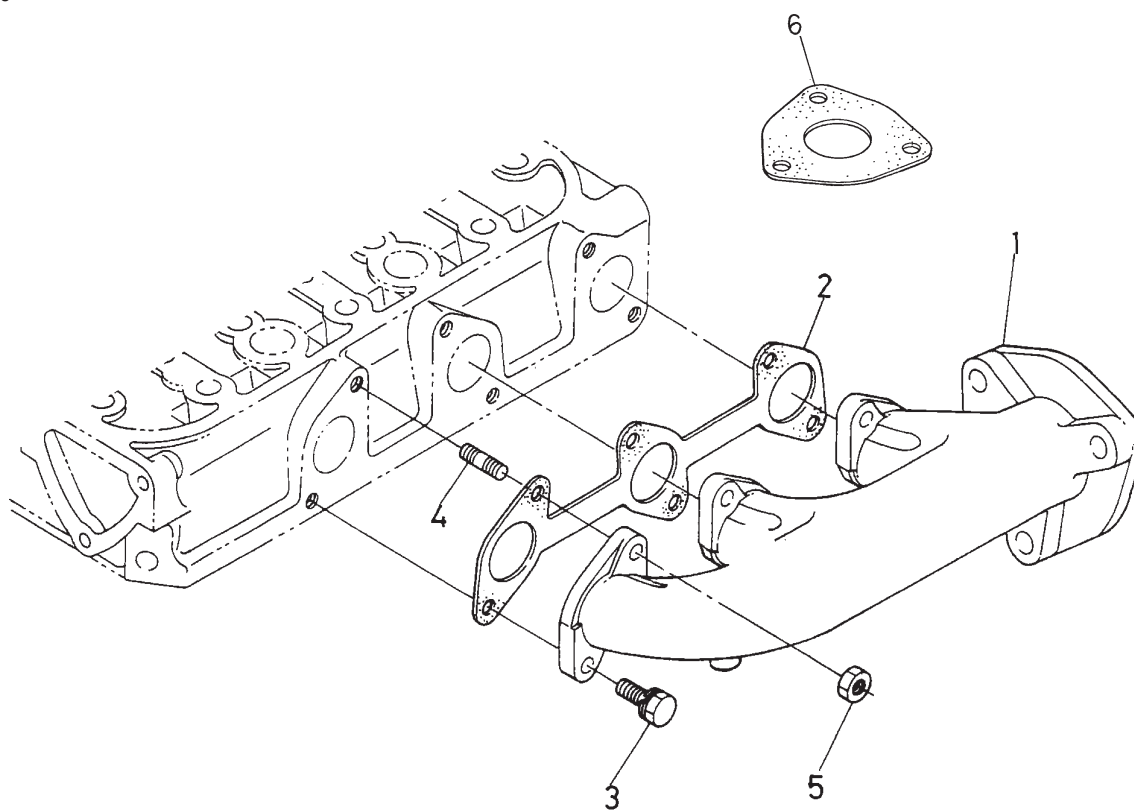


16689-003-10

Sheet No.:30

## Inlet Manifold Assembly

| Ref. No. | Part No. | Qty. | Description        |
|----------|----------|------|--------------------|
| 1        | 100-2235 | 1    | Manifold-Inlet     |
| 2        | 100-1937 | 1    | Gasket-In-Manifold |
| 3        | 98-7605  | 2    | Bolt               |
| 4        | 100-1765 | 3    | Bolt               |
| 5        | 100-2236 | 1    | Inlet Manifold ASM |



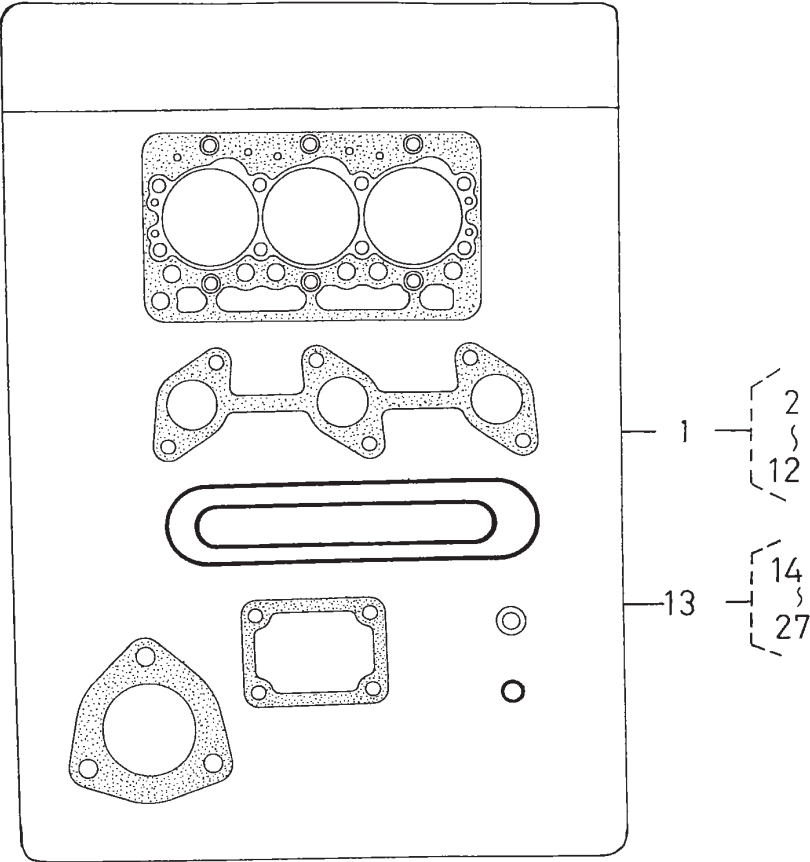
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Sheet No.:31

## Exhaust Manifold Assembly

| Ref. No. | Part No. | Qty. | Description      |
|----------|----------|------|------------------|
| 1        | 100-2244 | 1    | Manifold-Exhaust |
| 2        | 100-1957 | 1    | Gasket           |
| 3        | 100-1775 | 3    | Bolt-Ubs         |
| 4        | 100-2202 | 3    | Stud             |
| 5        | 100-1778 | 3    | Nut-Ubs          |
| 6        | 100-2238 | 1    | Gasket-Muffler   |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
|          |          |      |             |



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Sheet No.:32

# Gasket Kit

| Ref. No. | Part No. | Qty. | Description           |
|----------|----------|------|-----------------------|
| 1        | 100-2176 | 1    | Kit-Gasket, Upper     |
| 2        | 98-7509  | 1    | O-Ring                |
| 3        | 100-2043 | 1    | Gasket-Head, Cylinder |
| 4        | 100-1937 | 1    | Gasket-In-Manifold    |
| 5        | 100-1957 | 1    | Gasket                |
| 6        | 100-1797 | 6    | Seal-Stem, Valve      |
| 7        | 100-2030 | 1    | Gasket-Cover, Head    |
| 8        | 98-7654  | 3    | Gasket                |
| 9        | 99-3446  | 1    | O-Ring                |
| 10       | 100-1919 | 1    | Gasket-Flange, Water  |
| 11       | 100-2157 | 1    | Gasket-Thermostat     |
| 12       | 100-2238 | 1    | Gasket-Muffler        |
| 13       | 100-2174 | 1    | Kit-Gasket, Lower     |
| 14       | 100-1976 | 1    | Gasket-Pump, Water    |
| 15       | 100-1954 | 1    | Gasket-Case, Gear     |
| 16       | 100-2206 | 3    | O-Ring                |
| 17       | 100-1929 | 1    | Gasket-Case, Bearing  |
| 18       | 100-1876 | 1    | Gasket-Case, Bearing  |
| 19       | 100-2209 | 1    | O-Ring                |
| 20       | 100-2205 | 1    | O-Ring                |
| 21       | 100-2003 | 1    | Gasket-Pump, Oil      |
| 22       | 98-9636  | 1    | Gasket-Pump, Fuel     |
| 23       | 100-2061 | 1    | Gasket-Gearcase, H/M  |
| 24       | 100-1914 | 1    | Gasket                |

| Ref. No. | Part No. | Qty. | Description |
|----------|----------|------|-------------|
| 25       | 98-7428  | 2    | Gasket      |
| 26       | 100-2208 | 1    | O-Ring      |
| 27       | 100-2207 | 1    | O-Ring      |

## Maintenance Record

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## Maintenance Record

[illegible]

