

# Service Parts

Engine

Engine Models:

**John Deere TO4039D**

**4039TL**

**CD4039DF**

**CD4039TF**

**4045DF**

**4045TF**

Generator Models:

20-60 kW

Generator serial numbers 257821 and above

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## Introduction

This manual contains a list of service replacement parts for John Deere diesel-fueled 4039 and 4045 series engines. Refer to the Specification Number Index for generator models and specifications covered.

This manual includes the following main sections:

- *Table of Contents:* Lists the sections of this catalog.
- *Introduction (and other information sections):* Contains introductory material followed by sections on specification numbers, part numbers, and hardware.
- *Index:* Indexes generator set specifications and their groups.
- *Group Parts Lists:* List part numbers of parts in the groups.

## Number Significance

This catalog uses a variety of numbering systems. A description of these follows.

- *Specification Number:* The generator specification number (spec number) is six digits with a PA-, PB-, or PE-prefix (Specification Number Index does not show prefixes). The first three digits designate generator size and engine model (specification series). The remaining digits are in sequence and identify a particular spec in a series. Spec numbers break down into groups.

- *Group Number:* A group consists of parts needed to perform one or more related functions. For example, the 101 group is the generator set Air Intake group.

- *Variation Number:* A group might have several variations. Parts comprising each variation perform the same function, but parts lists vary. For example, a 50 Hz generator alternator and a 60 Hz generator alternator both perform the same function. However, they are constructed of different parts. Each of these differences necessitates the assignment of a group variation number.

- *Part Number:* The part number identifies an individual assembly, subassembly, component, or accessory kit.

## How to Find Part Numbers

**FOLLOW THESE STEPS** to identify a part:

**STEP 1:** Turn to the Specification Number Index. The first column lists generator set specification numbers grouped by model. The headings across the top identify the groups of parts that make up the generator set. The intersection of the specification number and the group numbers is the variation number corresponding to the components of that specification number. Note the variation number.

**STEP 2:** Find the page number of the group in the Table of Contents and turn to that page or page forward until you find the group. Use the drawings and itemized text to locate the part and its part number.

# Specification Number Index

| GROUP TITLE & NUMBER |   | <i>Air Intake</i> | <i>Water Pump</i> | <i>Thermostat</i> | <i>Fan Belt</i> | <i>Vent Tube</i> | <i>Camshaft</i> | <i>Valve Train</i> | <i>Rocker Arm Cover</i> | <i>Fuel Injection Pump</i> | <i>Fuel Injection Nozzle</i> | <i>Cylinder Block</i> | <i>Crankshaft</i> | <i>Crankshaft Pulley</i> |
|----------------------|---|-------------------|-------------------|-------------------|-----------------|------------------|-----------------|--------------------|-------------------------|----------------------------|------------------------------|-----------------------|-------------------|--------------------------|
| GROUP NO.            | 1 | 2a                | 2b                | 2c                | 3               | 4a               | 4b              | 4c                 | 5a                      | 5b                         | 7                            | 8a                    | 8b                |                          |
| VARIATION NUMBER     |   |                   |                   |                   |                 |                  |                 |                    |                         |                            |                              |                       |                   |                          |

| Engine Model     |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>20-40 kW</b>  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TO4039D          | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| CD4039DF         | 1 | 1 | 3 | 1 | 1 | 1 | 2 | 2 | 3 | 1 | 3 | 2 | 3 |
| 4045DF, 12 Volt  | 3 | 2 | 5 | 3 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 3 | 5 |
| 4045DF, 24 Volt  | 3 | 2 | 5 | 3 | 2 | 2 | 3 | 3 | 5 | 3 | 4 | 3 | 5 |
| <b>50/60 kW*</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4039TL           | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 |
| CD4039TF         | 2 | 1 | 4 | 2 | 1 | 1 | 2 | 2 | 3 | 2 | 3 | 2 | 4 |
| 4045TF, 12 Volt  | 4 | 2 | 5 | 3 | 2 | 2 | 3 | 3 | 6 | 4 | 4 | 3 | 5 |
| 4045TF, 24 Volt  | 4 | 2 | 5 | 3 | 2 | 2 | 3 | 3 | 7 | 4 | 4 | 3 | 5 |

\* These units used John Deere 4239TL engines on early model 50/60 kW (serial numbers below 257821) generator sets and John Deere 4039TL engines on newer model 50/60 kW (serial number 257821 and above) generator sets. Check the generator set nameplate for serial number and engine nameplate for engine model. Refer to Parts Catalog TP-5368 if generator set uses John Deere 4239TL engine.

# Specification Number Index

| GROUP TITLE & NUMBER | <i>Cylinder Head</i> | <i>Oil Filter &amp; Dipstick</i> | <i>Starter Motor</i> | <i>Starter Motor Components</i> | <i>Exhaust Manifold</i> | <i>Exhaust Elbow</i> | <i>Flywheel</i> | <i>Flywheel Housing</i> | <i>Fuel Pump</i> | <i>Fuel Filter</i> | <i>Balancer Shafts</i> | <i>Timing Gear Cover</i> | <i>Oil Pan</i> |
|----------------------|----------------------|----------------------------------|----------------------|---------------------------------|-------------------------|----------------------|-----------------|-------------------------|------------------|--------------------|------------------------|--------------------------|----------------|
| GROUP NO.            | 9                    | 10                               | 11a                  | 11b                             | 12a                     | 12b                  | 13a             | 13b                     | 14               | 15                 | 16                     | 18                       | 21a            |
| VARIATION NUMBER     |                      |                                  |                      |                                 |                         |                      |                 |                         |                  |                    |                        |                          |                |

| Model            |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>20-40 kW</b>  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TO4039D          | 1 | 1 | 1 | 1 | 1 | — | 1 | 1 | 1 | 1 | — | 1 | 1 |
| CD4039DF         | 2 | 2 | 1 | 1 | 1 | — | 1 | 1 | 1 | 2 | — | 2 | 1 |
| 4045DF, 12 Volt  | 3 | 3 | 2 | 2 | 3 | — | 2 | 3 | 2 | 3 | 4 | 3 | 3 |
| 4045DF, 24 Volt  | 3 | 3 | 3 | 3 | 3 | — | 2 | 3 | 2 | 3 | 4 | 3 | 3 |
| <b>50/60 kW*</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4039TL           | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 2 |
| CD4039TF         | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 3 | 2 | 2 |
| 4045TF, 12 Volt  | 3 | 3 | 2 | 2 | 4 | 3 | 2 | 3 | 2 | 3 | 4 | 3 | 4 |
| 4045TF, 24 Volt  | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 3 | 2 | 3 | 4 | 3 | 4 |

\* These units used John Deere 4239TL engines on early model 50/60 kW (serial numbers below 257821) generator sets and John Deere 4039TL engines on newer model 50/60 kW (serial number 257821 and above) generator sets. Check the generator set nameplate for serial number and engine nameplate for engine model. Refer to Parts Catalog TP-5368 if generator set uses John Deere 4239TL engine.

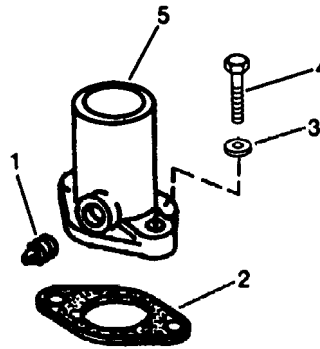
# Specification Number Index

| GROUP TITLE & NUMBER    | <i>Oil Fill Tube</i> | <i>Oil Cooler</i> | <i>Piston &amp; Connecting Rod</i> | <i>Oil Pump</i> | <i>Front Plate</i> | <i>Cylinder Head Gasket Set</i> | <i>Overhaul Gasket Set</i> | <i>Short Block</i> | <i>Turbocharger &amp; Oil Lines</i> | <i>Alternator</i> | <i>Alternator Brackets</i> | <i>Alternator Components</i> |
|-------------------------|----------------------|-------------------|------------------------------------|-----------------|--------------------|---------------------------------|----------------------------|--------------------|-------------------------------------|-------------------|----------------------------|------------------------------|
| <b>GROUP NO.</b>        | <b>21b</b>           | <b>21c</b>        | <b>22</b>                          | <b>25</b>       | <b>26</b>          | <b>39a</b>                      | <b>39b</b>                 | <b>42</b>          | <b>50</b>                           | <b>51a</b>        | <b>51b</b>                 | <b>51c</b>                   |
| <b>VARIATION NUMBER</b> |                      |                   |                                    |                 |                    |                                 |                            |                    |                                     |                   |                            |                              |

| Model            |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>20-40 kW</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| TO4039D          | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | — | 1 | 1 | 1 |
| CD4039DF         | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | — | 1 | 1 | 1 |
| 4045DF, 12 Volt  | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | — | 2 | 2 | — |
| 4045DF, 24 Volt  | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | — | 3 | 2 | — |
| <b>50/60 kW*</b> |   |   |   |   |   |   |   |   |   |   |   |   |
| 4039TL           | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 |
| CD4039TF         | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 3 | 1 | 1 | 1 |
| 4045TF, 12 Volt  | 2 | 3 | 4 | 3 | 2 | 3 | 3 | 3 | 4 | 2 | 2 | — |
| 4045TF, 24 Volt  | 2 | 3 | 4 | 3 | 2 | 3 | 3 | 3 | 4 | 3 | 2 | — |

\* These units used John Deere 4239TL engines on early model 50/60 kW (serial numbers below 257821) generator sets and John Deere 4039TL engines on newer model 50/60 kW (serial number 257821 and above) generator sets. Check the generator set nameplate for serial number and engine nameplate for engine model. Refer to Parts Catalog TP-5368 if generator set uses John Deere 4239TL engine.

# Group 1: Air Intake



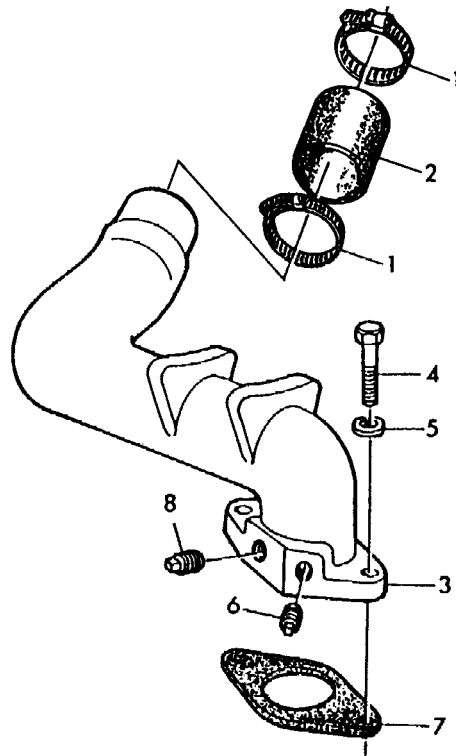
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TP25401

| Item | Part Number | Description                | Quantity |   |
|------|-------------|----------------------------|----------|---|
|      |             |                            | 1        | 3 |
| 1    | #           | Plug, 3/8 NPT pipe         | 1        |   |
| 2    | 223532      | Gasket                     | 1        | 1 |
| 3    | #           | Washer, 3/8" lock          | 2        |   |
| 4    | #           | Screw, 3/8-16 x 1-1/4" cap | 2        |   |
| 4    | #           | Screw, M10 x 35            |          | 2 |
| 5    | 223647      | Elbow, air intake          | 1        |   |
| 5    | 360545      | Air Intake                 |          | 1 |

# Common hardware; procure locally.

# Group 1: Air Intake, continued



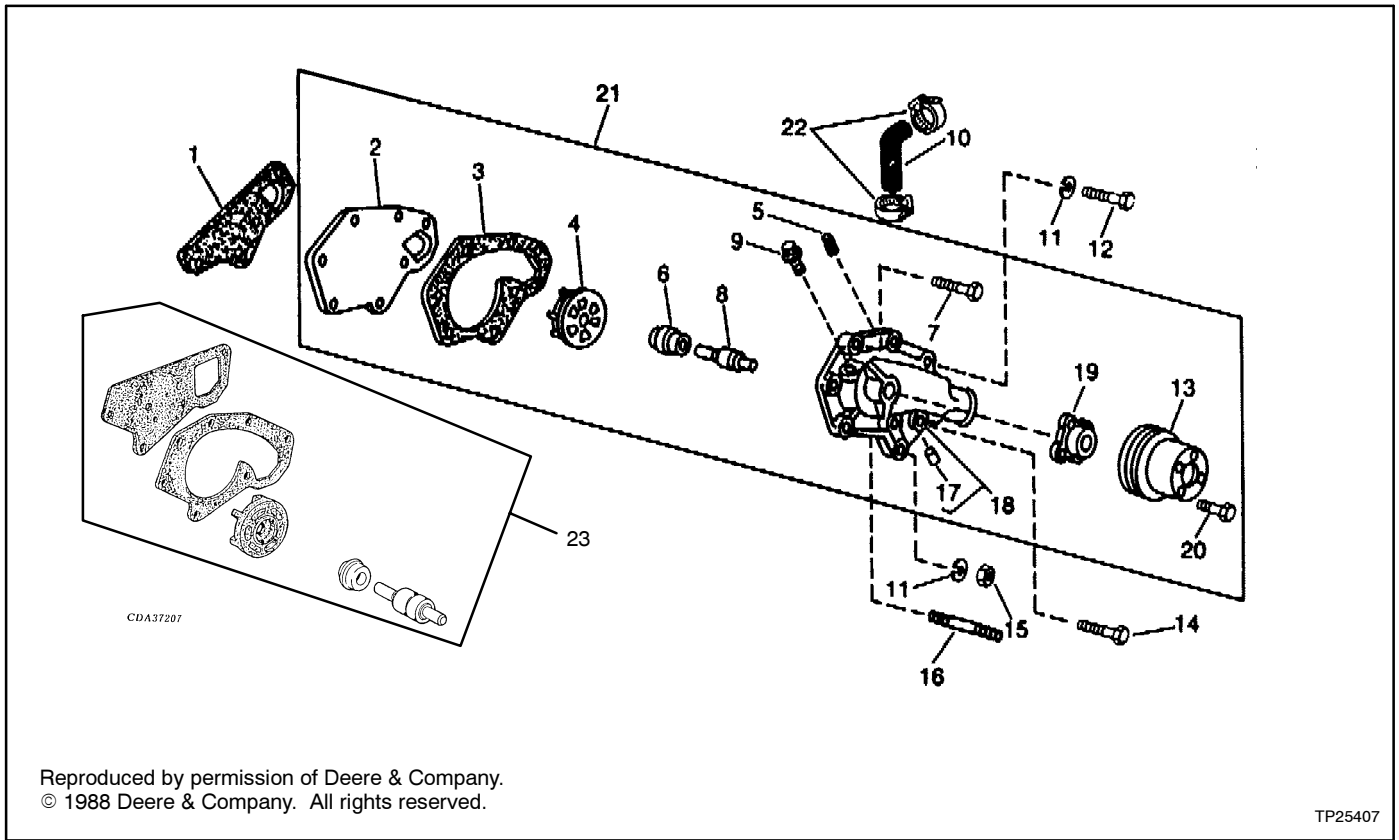
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TP14910  
 (was CD25559)

| Item | Part Number | Description            | Quantity |   |
|------|-------------|------------------------|----------|---|
|      |             |                        | 2        | 4 |
| 1    | #           | Clamp                  | 2        | 2 |
| 2    | #           | Hose, 2" ID x 2 1/2" L | 2        |   |
| 2    | 224152      | Hose                   |          | 4 |
| 3    | 223529      | Duct, air              | 1        |   |
| 3    | 360544      | Air Intake             |          | 1 |
| 4    | #           | Screw, 3/8-16 x 1-1/4" | 2        |   |
| 4    | #           | Screw, M10 x 25        |          | 2 |
| 5    | #           | Washer, 3/8 lock       | 2        |   |
| 6    | #           | Plug, 3/8 NPT          | 1        |   |
| 6    | #           | Plug                   |          | 1 |
| 7    | 223532      | Gasket                 | 1        | 1 |
| 8    | #           | Plug, 1/8 NPT pipe     | 1        |   |

# Common hardware; procure locally.

# Group 2a: Water Pump



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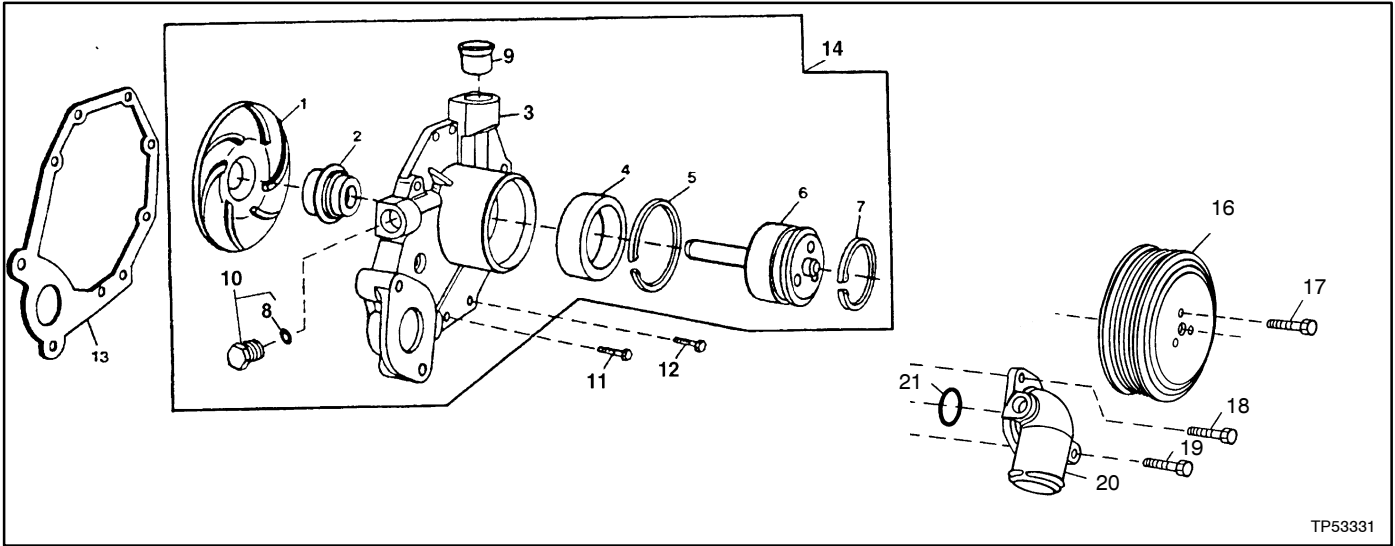
TP25407

| Item | Part Number | Description              | Quantity         |
|------|-------------|--------------------------|------------------|
|      |             |                          | Variation Number |
|      |             |                          | 1                |
| 1    | 223628      | Gasket                   | 1                |
| 2    | X           | Cover                    | 1                |
| 3    | X           | Gasket                   | 1                |
| 4    | X           | Impeller                 | 1                |
| 5    | #           | Plug, 1/2" pipe          | 1                |
| 6    | X           | Seal kit (w/insert tool) | 2                |
| 7    | #           | Screw, 3/8-16 x 1 3/8"   | 1                |
| 8    | X           | Bearing, ball            | 1                |
| 9    | X           | Fitting, hose            | 1                |
| 10   | 223629      | Hose                     | 3                |
| 11   | #           | Washer, 3/8" lock        | 1                |
| 12   | #           | Screw, 3/8-16 x 3 1/2"   | 1                |
| 12   | #           | Screw, 3/8-16 x 2"       | 1                |
| 13   | 223659      | Pulley                   | 1                |
| 14   | #           | Screw, 3/8-16 x 3 1/4"   | 1                |
| 15   | #           | Nut, 3/8-16              | 1                |
| 16   | 224336      | Stud                     | 1                |
| 17   | X           | Tube                     | 1                |
| 18   | X           | Pump, water              | 1                |
| 19   | X           | Hub                      | 1                |
| 20   | #           | Screw, 5/16-18 x 7/8"    | 4                |
| 21   | 223433      | Pump assembly, water     | 1                |
| 22   | #           | Clamp                    | 2                |
| 23   | 336633      | Water pump kit           | 1                |

# Common hardware, procure locally.

X Item not sold separately.

# Group 2a: Thermostat



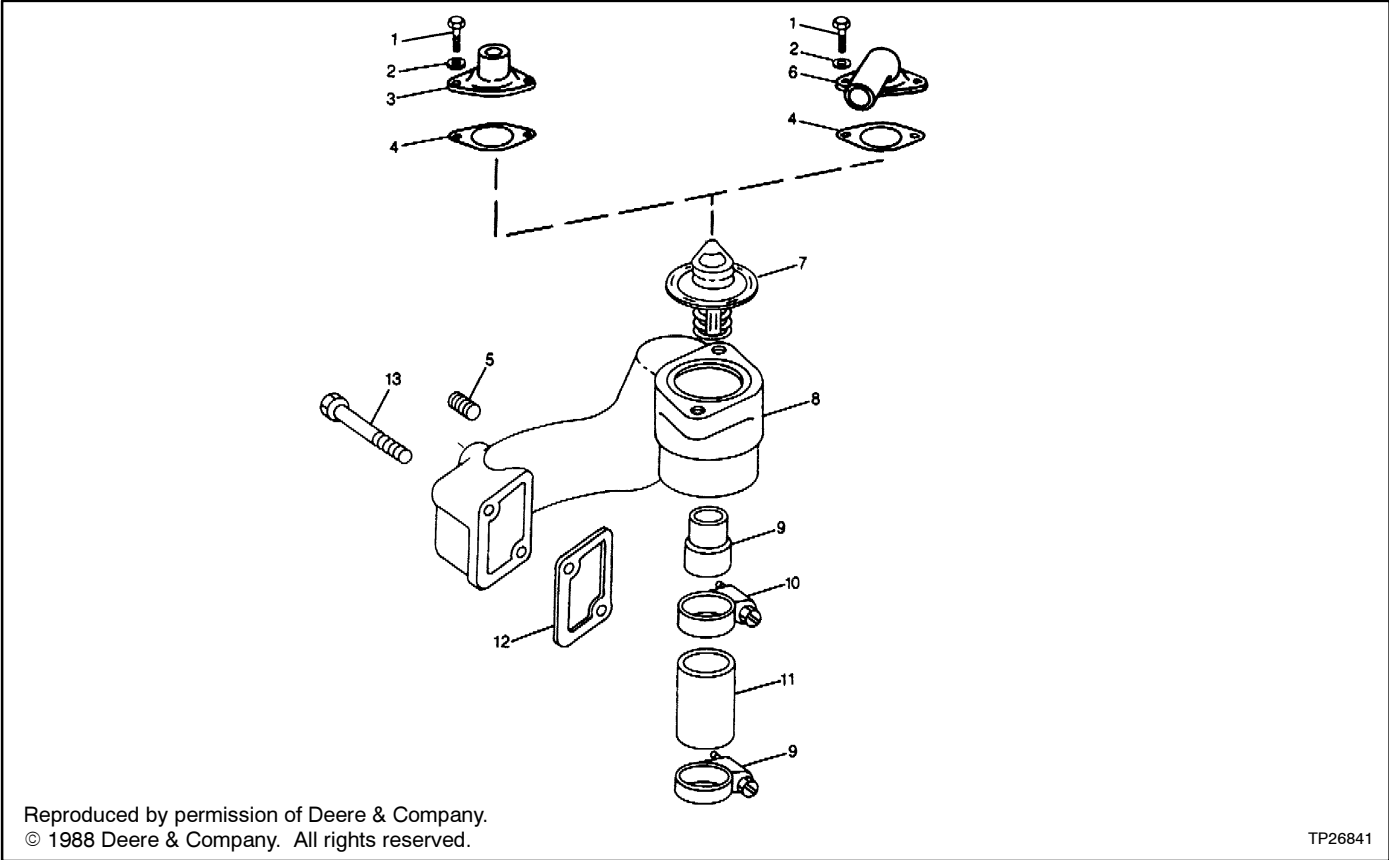
TP53331

| Item | Part Number | Description                                   | Quantity         |
|------|-------------|---|------------------|
|      |             |   | Variation Number |
| 1    | X           | Impeller                                      | 1                |
| 2    | X           | Seal  | 1                |
| 3    | X           | Housing                                       | 1                |
| 4    | X           | Bearing, ball                                 | 1                |
| 5    | X           | Ring  | 1                |
| 6    | X           | Shaft   | 1                |
| 7    | 360003      | Snap Ring                                     | 1                |
| 8    | 360176      | O-ring  | 1                |
| 9    | 360116      | Seal  | 1                |
| 10   | 360014      | Plug  | 1                |
| 11   | #           | Screw, M6 x 30                                | 3                |
| 12   | #           | Screw, M6 x 25                                | 5                |
| 13   | 360124      | Gasket  | 1                |
| 14   | 360029      | Water pump                                    | 1                |
| 15   | 360061      | Water pump repair kit (includes items 1-7, 9) | 1                |
| 16   | 360559      | Water pump pulley                             | 1                |
| 17   | #           | Screw, M6 x 12                                | 3                |
| 18   | #           | Screw, M8 x 25                                | 1                |
| 19   | #           | Screw, M8 x 65                                | 1                |
| 20   | 360109      | Water pump adapter                            | 1                |
| 21   | 224172      | O-ring  | 1                |

# Common hardware, procure locally.

X Item not sold separately.

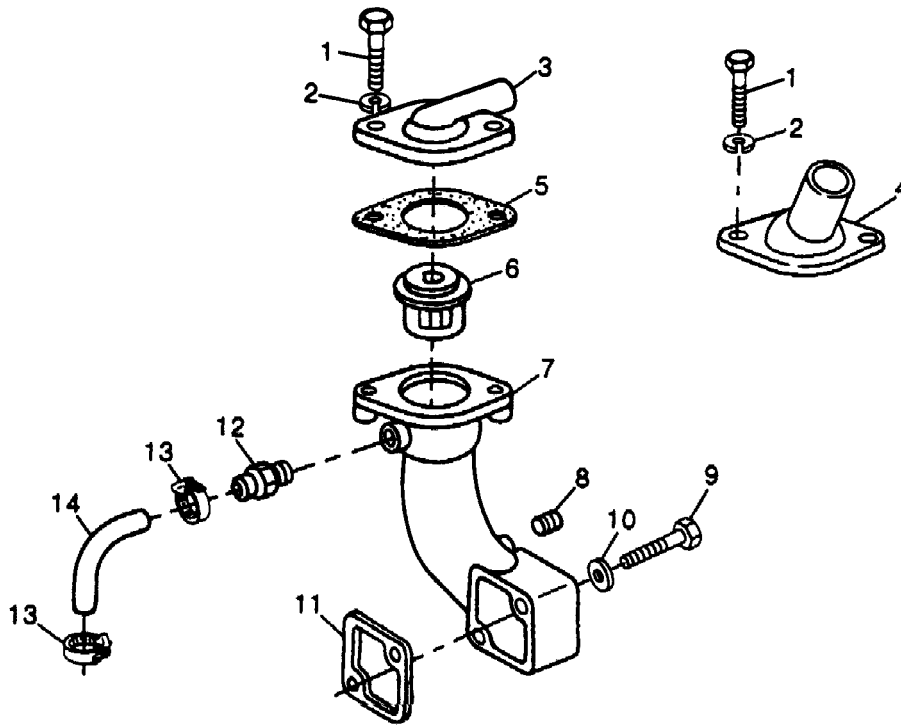
# Group 2b: Thermostat



| Item | Part Number | Description                          | Quantity |   |
|------|-------------|--------------------------------------|----------|---|
|      |             |                                      | 1        | 3 |
| 1    | #           | Screw, 3/8-16 x 1-1/4"               | 2        |   |
| 1    | #           | Screw, 3/8-16 x 1-1/2"               |          | 2 |
| 2    | #           | Washer, plain 13/32 x 11/16 x 0.060" | 2        | 2 |
| 3    | 223635      | Cover                                | 1        |   |
| 3    | 336444      | Cover                                |          | 1 |
| 4    | 223626      | Gasket                               | 1        |   |
| 4    | 336445      | Gasket                               |          | 1 |
| 5    | #           | Plug, 1/2 NPT pipe                   | 1        | 1 |
| 6    | not used    |                                      |          |   |
| 7    | 223676      | Thermostat                           | 1        | 1 |
| 8    | 224286      | Housing                              | 1        | 1 |
| 9    | 224275      | Tube                                 | 1        | 1 |
| 10   | #           | Clamp, hose                          | 2        | 2 |
| 11   | 224276      | Hose                                 | 1        | 1 |
| 12   | 224020      | Gasket, thermostat housing           | 1        | 1 |
| 13   | #           | Screw, 3/8-16 x 2-3/4"               | 2        | 2 |
| 13   | #           | Washer, 3/8" lock                    | 2        | 2 |

# Common hardware, procure locally.

# Group 2b: Thermostat, continued



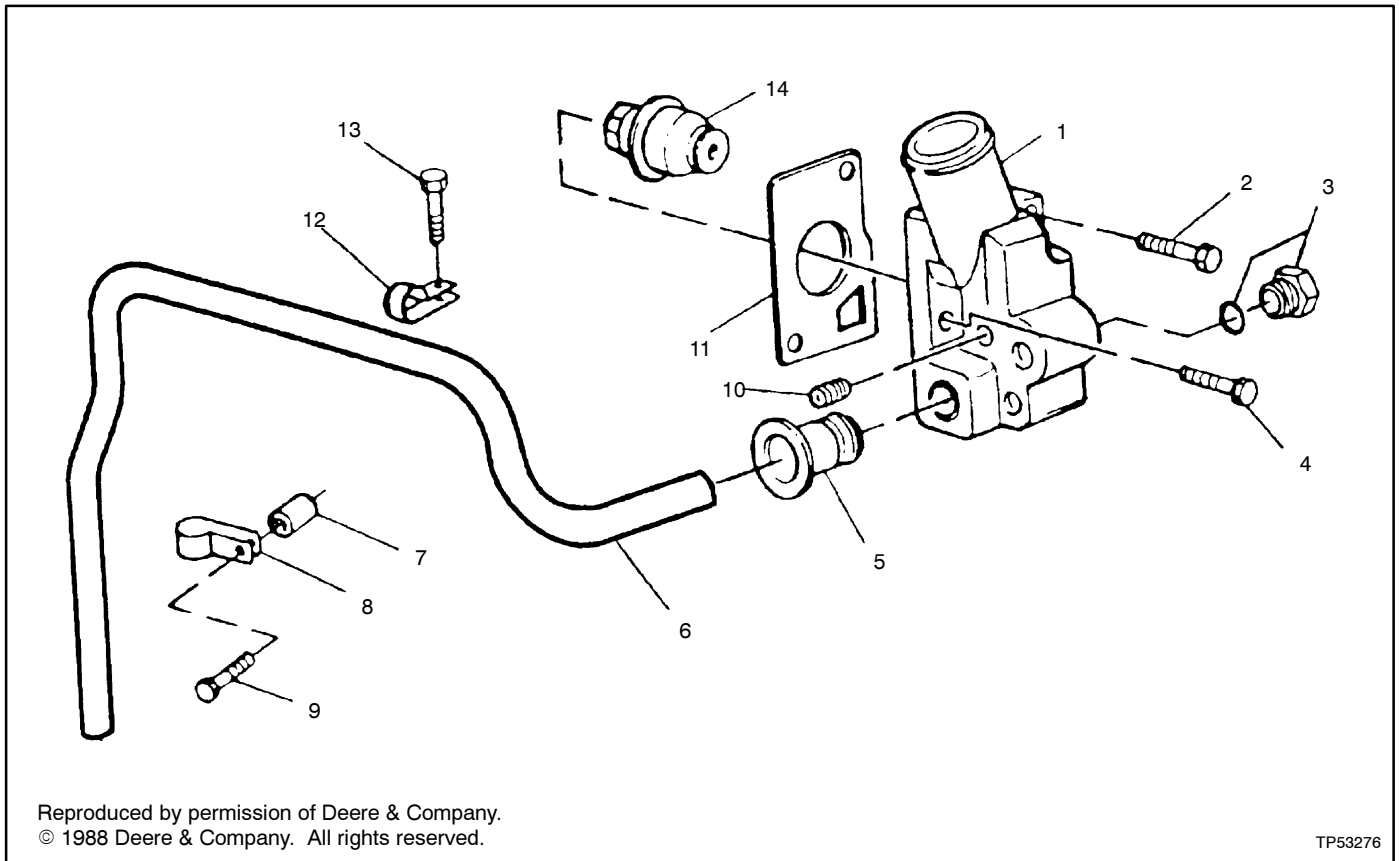
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TP26869

| Item | Part Number | Description                  | Quantity           |                    |
|------|-------------|------------------------------|--------------------|--------------------|
|      |             |                              | Variation Number 2 | Variation Number 4 |
| 1    | #           | Screw, 3/8-16 x 1-1/4"       | 2                  |                    |
| 1    | #           | Screw, 3/8-16 x 1-1/2"       |                    | 2                  |
| 2    | #           | Washer, 13/32 x 11/16 x .06" | 2                  | 2                  |
| 3    | not used    |                              |                    |                    |
| 4    | 223635      | Cover                        | 1                  |                    |
| 4    | 336444      | Cover                        |                    | 1                  |
| 5    | 223626      | Gasket                       | 1                  |                    |
| 5    | 336445      | Gasket                       |                    | 1                  |
| 6    | 223595      | Thermostat                   | 1                  | 1                  |
| 7    | 224350      | Housing                      | 1                  | 1                  |
| 8    | #           | Plug, 1/2 NPT pipe           | 1                  | 1                  |
| 9    | #           | Screw, 3/8-16 x 2-3/4" cap   | 2                  | 2                  |
| 10   | #           | Washer, 3/8" lock            | 2                  | 2                  |
| 11   | 224020      | Gasket, thermostat housing   | 1                  | 1                  |
| 12   | 223605      | Fitting, hose                | 1                  | 1                  |
| 13   | #           | Clamp                        | 2                  | 2                  |
| 14   | 223629      | Hose                         | 1                  | 1                  |

# Common hardware, procure locally.

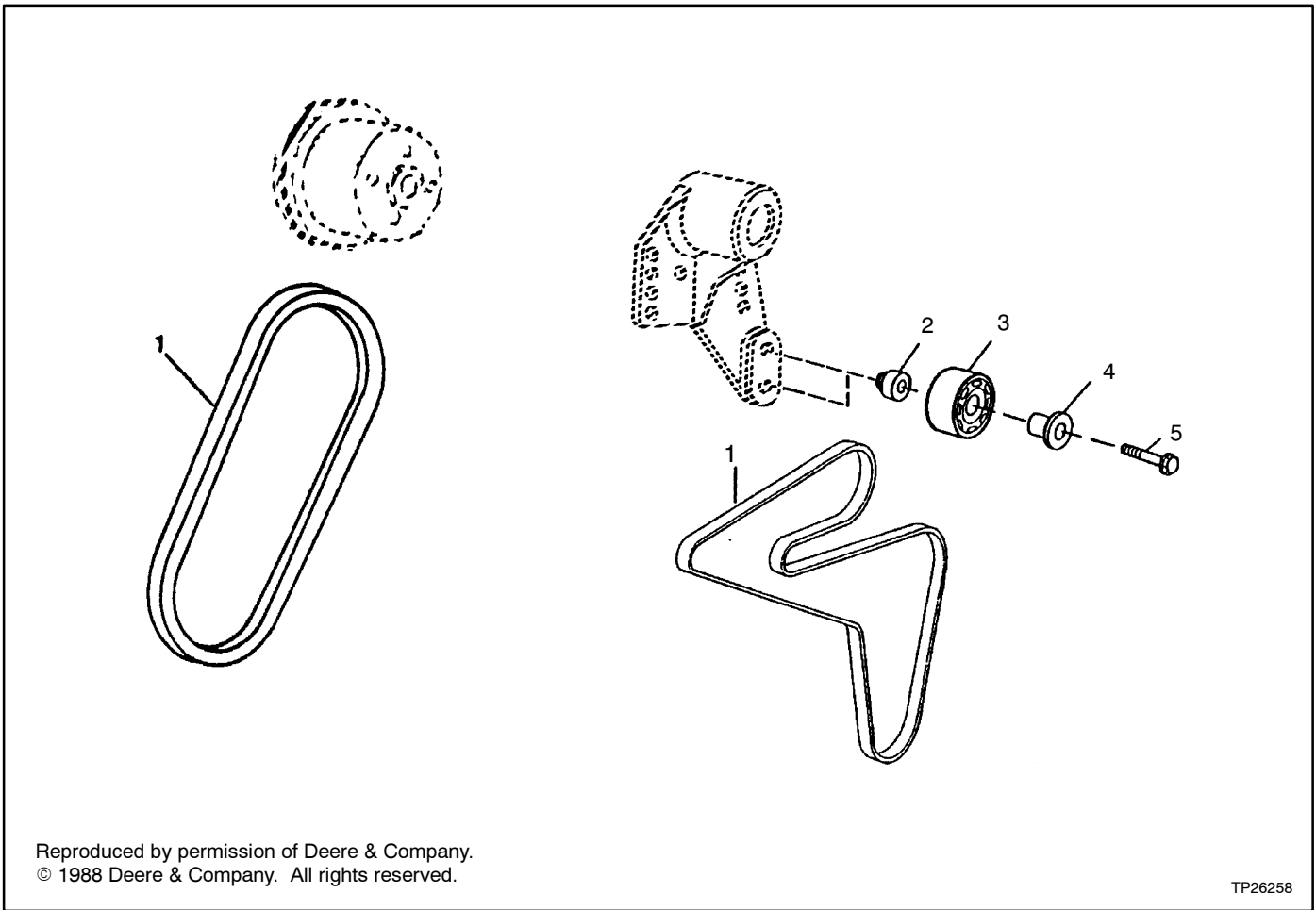
## Group 2b: Thermostat, continued



| Item | Part Number | Description                  | Quantity         |
|------|-------------|------------------------------|------------------|
|      |             |                              | Variation Number |
| 1    | 360126      | Cover, thermostat            | 1                |
| 2    | #           | Screw, M10 x 70              | 1                |
| 3    | 360013      | Plug                         | 1                |
| 4    | #           | Screw, M10 x 30              | 2                |
| 5    | 360116      | Seal                         | 1                |
| 6    | 360142      | Tube                         | 1                |
| 7    | #           | Washer, 0.423 x 0.675 x 3/8" | 1                |
| 8    | 360121      | Clamp                        | 1                |
| 9    | #           | Screw, M8 x 60               | 1                |
| 10   | #           | Pipe Plug, 1/2"              | 3                |
| 11   | 360484      | Gasket, thermostat cover     | 1                |
| 12   | 360120      | Clamp                        | 1                |
| 13   | #           | Screw, M8 x 60               | 1                |
| 14   | 223595      | Thermostat                   | 1                |

# Common hardware, procure locally.

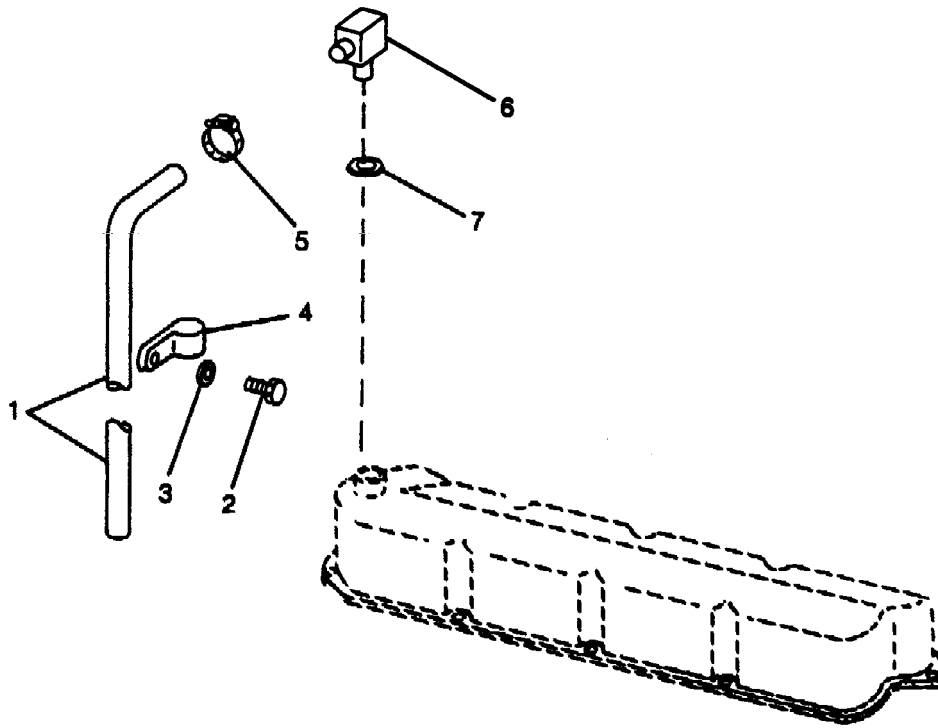
# Group 2c: Fan Belt



| Item | Part Number | Description                 | Quantity |   |   |
|------|-------------|-----------------------------|----------|---|---|
|      |             |                             | 1        | 2 | 3 |
| 1    | 224263      | Belt set (matched set of 2) | 1        |   |   |
| 1    | 223640      | Belt, 11/16 x 49-1/2"       |          | 1 |   |
| 1    | 360483      | Belt, fan                   |          |   | 1 |
| 2    | 360583      | Spacer                      |          |   | 1 |
| 3    | 352836      | Pulley                      |          |   | 1 |
| 4    | 360584      | Sleeve                      |          |   | 1 |
| 5    | #           | Screw, M10 x 65             |          |   | 1 |

# Common hardware, procure locally.

# Group 3: Vent Tube



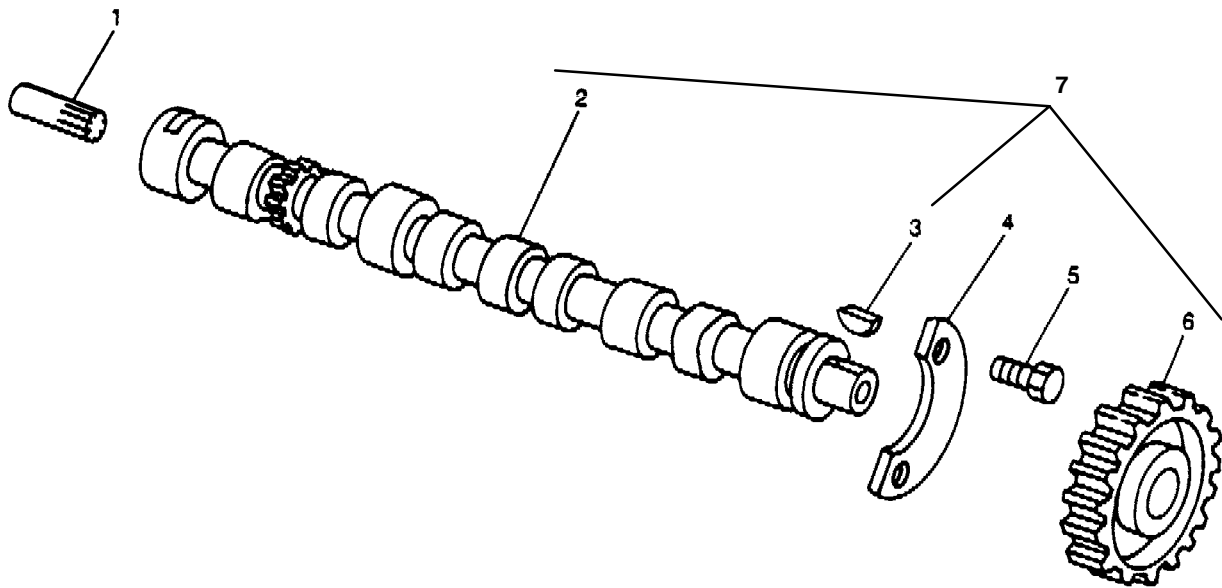
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TP10829

| Item | Part Number | Description                  | Quantity |   |
|------|-------------|------------------------------|----------|---|
|      |             |                              | 1        | 2 |
| 1    | 223450      | Hose                         | 1        |   |
| 1    | 224237      | Hose                         |          | 1 |
| 2    | #           | Screw, 3/8-16 x 7/8" cap     | 1        |   |
| 2    | #           | Screw, M8 x 20               |          | 1 |
| 3    | #           | Washer, 13/32 x 11/16 x .06" | 1        |   |
| 3    | #           | Washer, 3/8" lock            | 1        |   |
| 4    | #           | Clamp                        | 1        | 1 |
| 5    | #           | Clamp                        | 1        |   |
| 6    | 223551      | Elbow, fitting               | 1        |   |
| 6    | 360098      | Elbow, fitting               |          | 1 |
| 7    | 223491      | O-ring                       | 1        |   |
| 7    | 223851      | O-ring                       |          | 1 |

# Common hardware, procure locally.

# Group 4a: Camshaft



**NOTE:** Camshaft bushings/bearings are not used in this application.

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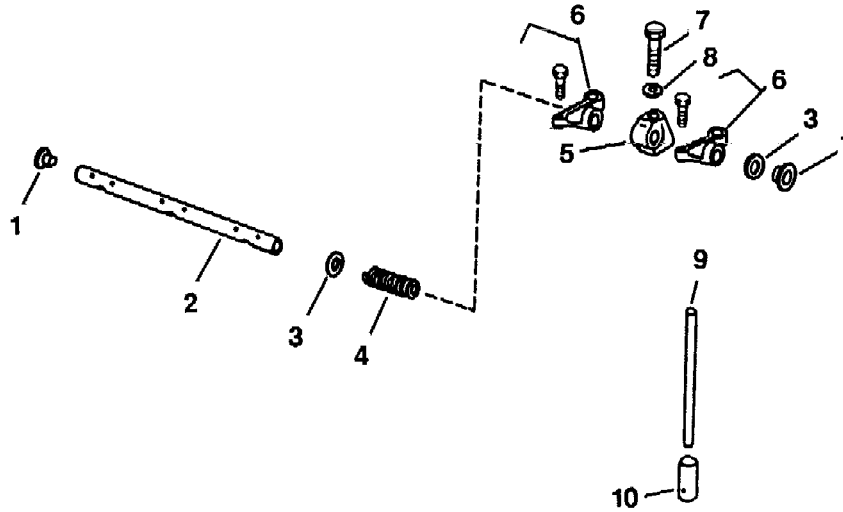
TP14248

| Item | Part Number | Description             | Quantity         |   |
|------|-------------|-------------------------|------------------|---|
|      |             |                         | Variation Number |   |
|      |             |                         | 1                | 2 |
| 1    | 224242      | Gear (12 teeth)         | 1                |   |
| 2    | 223536      | Camshaft (without gear) | 1                |   |
| 2    | 360505      | Camshaft (without gear) |                  | 1 |
| 3    | 223564      | Key, shaft              | 1                |   |
| 3    | 360158      | Key, shaft              |                  | 1 |
| 4    | 223610      | Plate (thrust)          | 1                |   |
| 5    | #           | Screw, 3/8-16 x 1" cap  | 1                |   |
| 6    | 223609      | Gear (48 teeth)         | 1                |   |
| 6    | 360161      | Gear (60 teeth)         |                  | 1 |
| 7    | 360506      | Kit, camshaft and gear  |                  | 1 |

# Common hardware, procure locally.

# Group 4b: Valve Train

For Valves,  
see Group 9, Cylinder Head



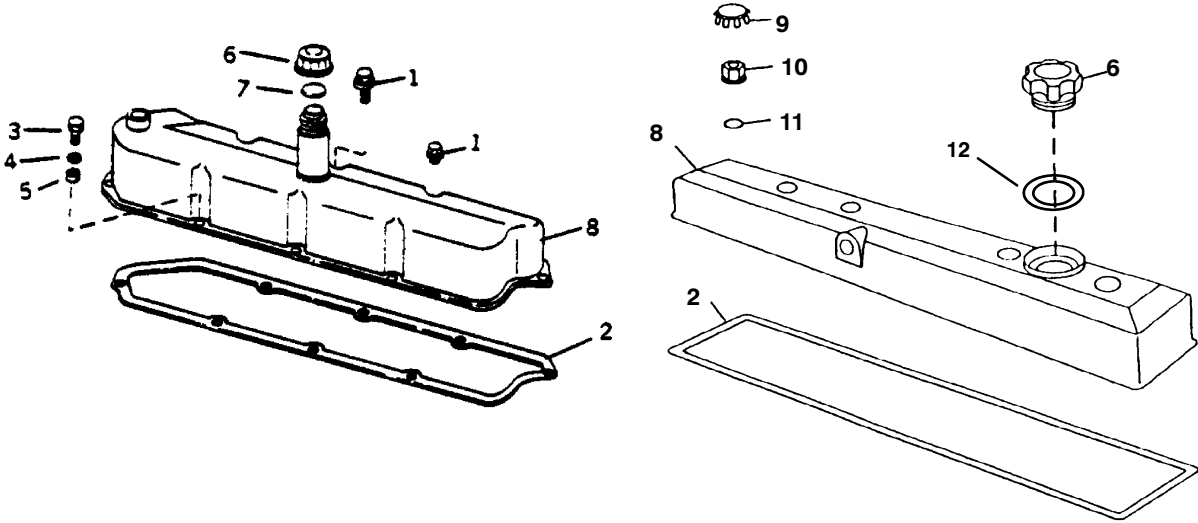
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TP857  
(was TP16446)

| Item | Part Number | Description                | Quantity           |                    |                    |
|------|-------------|----------------------------|--------------------|--------------------|--------------------|
|      |             |                            | Variation Number 1 | Variation Number 2 | Variation Number 3 |
| 1    | 223480      | Plug                       | 1                  | 1                  | 1                  |
| 2    | 223481      | Shaft                      | 1                  | 1                  |                    |
| 2    | 360509      | Shaft                      |                    |                    | 1                  |
| 3    | 223634      | Washer                     | 2                  | 2                  | 2                  |
| 4    | 223632      | Spring                     | 3                  | 3                  | 3                  |
| 5    | 223633      | Support                    | 4                  | 4                  |                    |
| 5    | 360112      | Support                    |                    |                    | 4                  |
| 6    | 223592      | Arm, rocker                | 8                  |                    |                    |
| 6    | 336456      | Arm, rocker                |                    | 8                  |                    |
| 6    | 360072      | Arm, rocker                |                    |                    | 8                  |
| 6    | #           | Nut, M8 (not shown)        |                    |                    | 8                  |
| 7    | #           | Screw, 3/8-16 x 2-1/2" cap | 4                  | 4                  |                    |
| 7    | 360118      | Stud                       |                    |                    | 4                  |
| 8    | 223756      | Washer                     | 4                  | 4                  | 4                  |
| 9    | 223537      | Rod, push                  | 8                  |                    |                    |
| 9    | 336455      | Rod, push                  |                    | 8                  |                    |
| 9    | 352026      | Rod, push                  |                    |                    | 8                  |
| 10   | 223611      | Tappet                     | 8                  | 8                  |                    |
| 10   | 360135      | Tappet                     |                    |                    | 8                  |

# Common hardware, procure locally.

# Group 4c: Rocker Arm Cover



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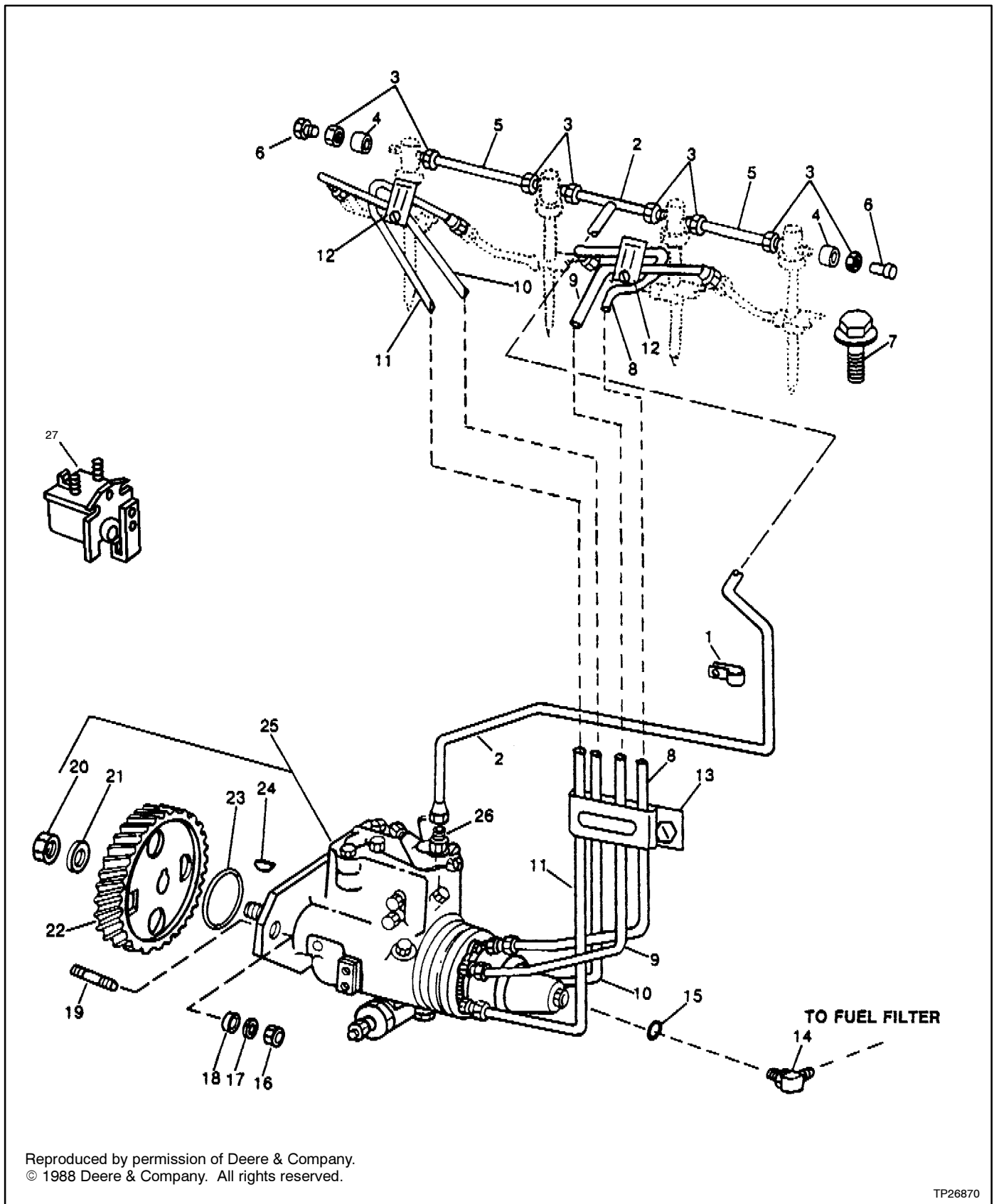
T49114F

| Item | Part Number | Description          | Quantity         |   |   |
|------|-------------|----------------------|------------------|---|---|
|      |             |                      | Variation Number |   |   |
|      |             |                      | 1                | 2 | 3 |
| 1    | #           | Screw, w/washer      | 8                | 8 |   |
| 2    | 223508      | Gasket               | 1                |   |   |
| 2    | 336434      | Gasket               |                  | 1 |   |
| 2    | 360585      | Gasket               |                  |   | 1 |
| 3    | #           | Screw, 1/4-20 x 7/8" | 1                |   |   |
| 4    | #           | Washer, 1/4" lock    | 1                |   |   |
| 5    | 224278      | Washer               | 1                |   |   |
| 6    | 223630      | Cap                  | 1                |   |   |
| 6    | 336435      | Cap                  |                  | 1 |   |
| 6    | 360018      | Cap                  |                  |   | 1 |
| 7    | 223636      | Gasket               | 1                |   |   |
| 8    | 223444      | Cover                | 1                |   |   |
| 8    | 336433      | Cover                |                  | 1 |   |
| 8    | 360507      | Cover                |                  |   | 1 |
| 9    | 360004      | Plug                 |                  | 4 |   |
| 10   | 360138      | Nut                  |                  | 4 |   |
| 11   | 360139      | O-ring               |                  | 4 |   |
| 12   | 360508      | Packing              |                  | 1 |   |

# Common hardware, procure locally.

# Notes

# Group 5a: Fuel Injection Pump



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TP26870

## Group 5a: Fuel Injection Pump

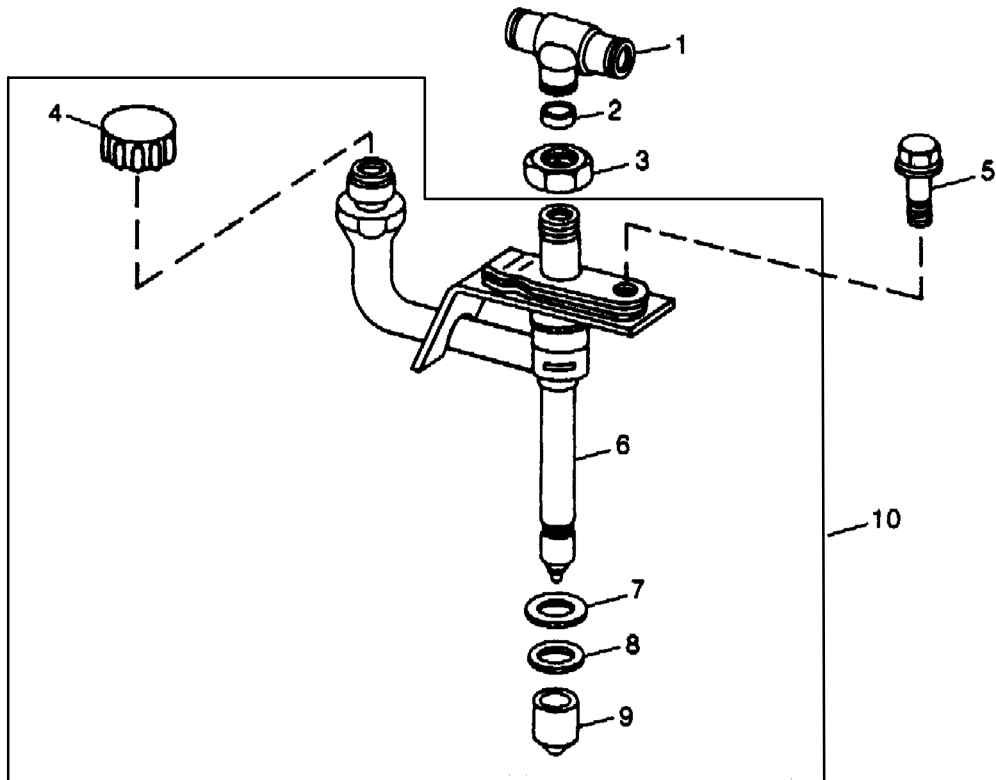
| Item | Part Number | Description                      | Quantity         |   |   |   |   |   |   |
|------|-------------|----------------------------------|------------------|---|---|---|---|---|---|
|      |             |                                  | Variation Number |   |   |   |   |   |   |
|      |             |                                  | 1                | 2 | 3 | 4 | 5 | 6 | 7 |
| 1    | 223655      | Clamp (clip)                     | 1                | 1 | 1 |   |   |   |   |
| 2    | 224262      | Tube                             | 1                | 1 | 1 |   |   |   |   |
| 2    | 360035      | Fuel line                        |                  |   |   | 1 | 1 | 1 | 1 |
| 3    | 223477      | Nut (fitting)                    | 8                | 8 | 8 |   |   |   |   |
| 3    | 360141      | Nut                              |                  |   |   | 7 | 7 | 7 | 7 |
| 4    | 223476      | Packing                          | 8                | 8 |   |   |   |   |   |
| 5    | 223504      | Tube                             | 2                | 2 |   |   |   |   |   |
| 5    | 360535      | Tube                             |                  |   |   | 3 | 3 | 3 | 3 |
| 6    | #           | Rivet, 1/4 x 5/8"                | 2                | 2 | 2 |   |   |   |   |
| 6    | 223710      | Plug                             |                  |   |   | 1 | 1 | 1 | 1 |
| 7    | 224188      | Screw, cap                       | 4                | 4 | 4 |   |   |   |   |
| 8    | 223576      | Line, fuel no. 3                 | 1                | 1 |   |   |   |   |   |
| 8    | 336441      | Line, fuel no. 3                 |                  |   | 1 |   |   |   |   |
| 8    | 360538      | Line, fuel no. 3                 |                  |   |   | 1 | 1 | 1 | 1 |
| 9    | 223577      | Line, fuel no. 4                 | 1                | 1 |   |   |   |   |   |
| 9    | 336442      | Line, fuel no. 4                 |                  |   | 1 |   |   |   |   |
| 9    | 360539      | Line, fuel no. 4                 |                  |   |   | 1 | 1 | 1 | 1 |
| 10   | 223574      | Line, fuel no. 1                 | 1                | 1 |   |   |   |   |   |
| 10   | 336439      | Line, fuel no. 1                 |                  |   | 1 |   |   |   |   |
| 10   | 360536      | Line, fuel no. 1                 |                  |   |   | 1 | 1 | 1 | 1 |
| 11   | 223575      | Line, fuel no. 2                 | 1                | 1 |   |   |   |   |   |
| 11   | 336440      | Line, fuel no. 2                 |                  |   | 1 |   |   |   |   |
| 11   | 360537      | Line, fuel no. 2                 |                  |   |   | 1 | 1 | 1 | 1 |
| 12   | 223572      | Clamp                            | 2                | 2 | 2 | 2 | 2 | 2 | 2 |
| 12   | #           | Screw, M6 x 10 cap               | 2                | 2 | 2 | 2 | 2 | 2 | 2 |
| 13   | 223573      | Clamp                            | 1                | 1 | 1 | 1 | 1 | 1 | 1 |
| 13   | #           | Screw, cap M6 x 10 (full thread) | 1                | 1 | 1 | 1 | 1 | 1 | 1 |
| 14   | 223447      | Elbow, fitting                   | 1                | 1 | 1 |   |   |   |   |
| 14   | 360037      | Fitting                          |                  |   |   | 1 | 1 | 1 | 1 |
| 15   | 223456      | O-ring                           | 1                | 1 | 1 |   |   |   |   |
| 15   | 360178      | O-ring                           |                  |   |   | 1 | 1 | 1 | 1 |
| 16   | #           | Nut, 5/16-18                     | 3                | 3 | 3 |   |   |   |   |
| 16   | #           | Nut, M8                          |                  |   |   | 3 | 3 | 3 | 3 |
| 17   | #           | Washer, 5/16"                    | 3                | 3 | 3 | 3 | 3 | 3 | 3 |
| 18   | #           | Washer, 11/32 x 11/16 x 1/16"    | 3                | 3 | 3 |   |   |   |   |
| 18   | 224338      | Washer                           |                  |   |   | 3 | 3 | 3 | 3 |
| 19   | 224335      | Stud                             | 3                | 3 | 3 |   |   |   |   |
| 19   | 360092      | Stud                             |                  |   |   | 3 | 3 | 3 | 3 |
| 20   | 224161      | Nut                              | 1                | 1 | 1 | 1 | 1 | 1 | 1 |
| 21   | 223471      | Washer, lock                     | 1                | 1 | 1 | 1 | 1 | 1 | 1 |
| 22   | 223540      | Gear                             | 1                |   | 1 |   |   |   |   |
| 22   | 224238      | Gear                             |                  | 1 |   |   |   |   |   |
| 22   | 360153      | Gear                             |                  |   |   | 1 | 1 | 1 | 1 |
| 23   | 224172      | Ring                             | 1                | 1 | 1 |   |   |   |   |
| 24   | 223406      | Shaft, key 5/32 x 5/8"           | 1                | 1 | 1 | 1 | 1 | 1 | 1 |
| 25   | 223578      | Pump, fuel injection*            | 1                |   |   |   |   |   |   |
| 25   | 224330      | Pump, fuel injection**           | 1                |   | 1 |   |   |   |   |
| 25   | 224329      | Pump, fuel injection             |                  | 1 |   |   |   |   |   |
| 25   | 360540      | Pump, fuel injection             |                  |   |   | 1 |   |   |   |
| 25   | 360541      | Pump, fuel injection             |                  |   |   |   | 1 |   |   |
| 25   | 360542      | Pump, fuel injection             |                  |   |   |   |   | 1 |   |
| 25   | 360543      | Pump, fuel injection             |                  |   |   |   |   |   | 1 |
| 26   | 223460      | Fitting                          | 1                | 1 | 1 |   |   |   |   |
| 26   | 223820      | Fitting                          |                  |   |   | 1 | 1 | 1 | 1 |
| 127  | 224367      | Fuel shutoff solenoid            | 1                | 1 | 1 |   |   |   |   |

# Common hardware, procure locally.

\* Variation 1, engine serial numbers 349266 and below.

\*\*Variation 1, engine serial numbers 349267 and above.

# Group 5b: Fuel Injection Nozzle



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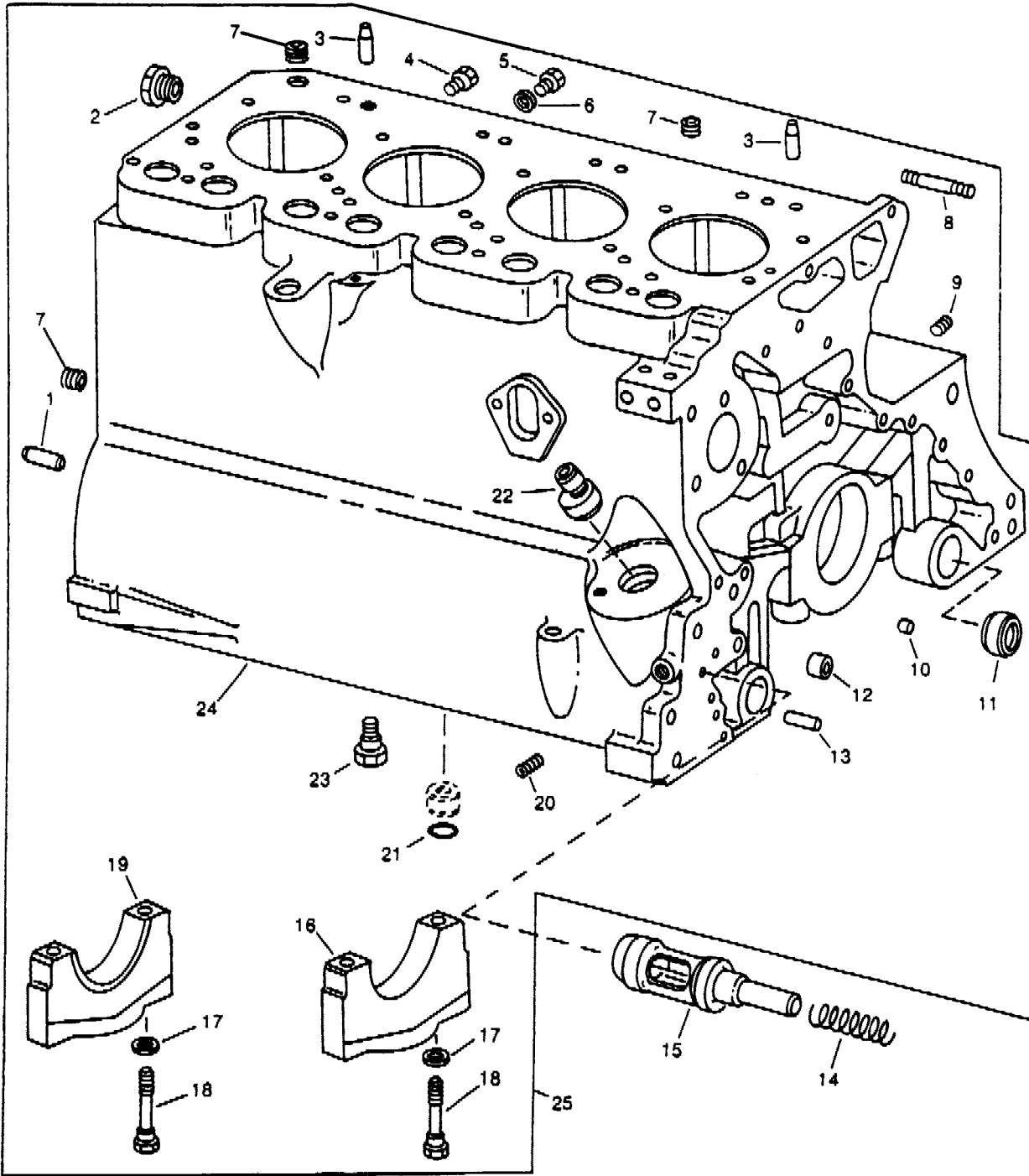
TP26862

| Item | Part Number | Description                               | Quantity         |   |   |   |
|------|-------------|---|------------------|---|---|---|
|      |             |   | Variation Number |   |   |   |
|      |             |   | 1                | 2 | 3 | 4 |
| 1    | 223519      | Fitting, tee                              | 1                | 1 |   |   |
| 1    | 360167      | Fitting, tee                              |                  |   | 1 | 1 |
| 2    | 223518      | Washer (sleeve)                           | 1                | 1 | 1 | 1 |
| 3    | 223517      | Nut                                       | 1                | 1 | 1 | 1 |
| 4    | 223660      | Plug (use for servicing nozzle)           | 1                | 1 |   |   |
| 5    | 224188      | Screw, cap                                | 1                | 1 |   |   |
| 5    | 360091      | Screw                                     |                  |   | 1 | 1 |
| 6    | X           | Nozzle                                    | 1                | 1 | 1 | 1 |
| 7    | 224277      | Washer                                    | 1                |   |   |   |
| 7    | 224285      | Packing                                   |                  | 1 | 1 | 1 |
| 8    | 224270      | Washer                                    | 1                | 1 | 1 | 1 |
| 9    | X           | Plug, plastic (protective shipping cover) | 1                | 1 |   |   |
| 10   | 224299      | Nozzle, injection                         | 1                |   |   |   |
| 10   | 224171      | Nozzle, injection                         |                  | 1 |   |   |
| 10   | 360485      | Nozzle, injection                         |                  |   | 1 |   |
| 10   | 360017      | Nozzle, injection                         |                  |   |   | 1 |

X Item not sold separately.

# Notes

# Group 7: Cylinder Block



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TP26876

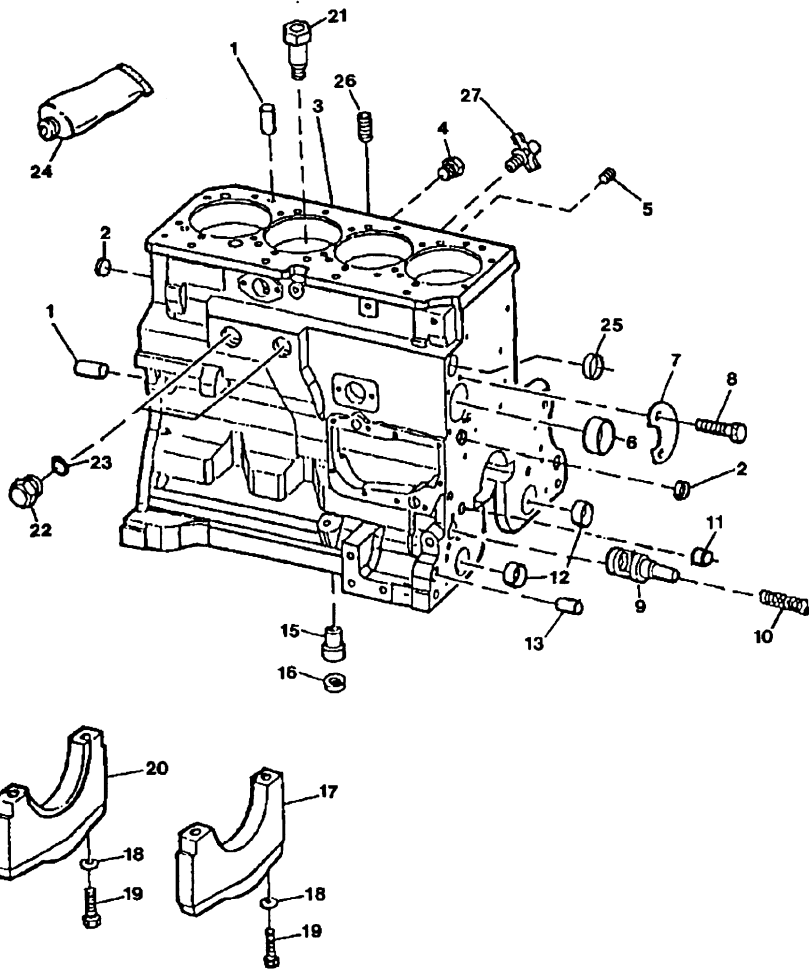
## Group 7: Cylinder Block

| Item | Part Number  | Description                          | Quantity         |    |    |
|------|--------------|--------------------------------------|------------------|----|----|
|      |              |                                      | Variation Number |    |    |
|      |              |                                      | 1                | 2  | 3  |
| 1    | 223472       | Pin, dowel                           | 2                | 2  | 2  |
| 2    | #            | Plug, pipe 3/4 NPT, 3/8" recess. hex | 1                | 1  | 1  |
| 3    | 223472       | Pin, dowel                           | 2                | 2  | 2  |
| 4    | #            | Plug, pipe 1/4 NPT                   | 1                | 1  | 1  |
| 5    | 223462       | Plug, drain                          | 1                | 1  | 1  |
| 6    | 223988       | O-ring                               | 1                | 1  | 1  |
| 7    | #            | Plug, pipe                           |                  | 3  |    |
| 8    | 223662       | Stud                                 | 2                | 2  | 2  |
| 9    | #            | Plug, pipe                           | 5                | 5  | 5  |
| 10   | #            | Cap                                  | 1                | 1  | 1  |
| 11   | 223494       | Bushing (std.)                       | 6                | 6  | 6  |
| 11   | 223550       | Bushing (0.078" o/s)                 | 6                | 6  | 6  |
| 12   | X            | Bushing                              | 1                | 1  | 1  |
| 13   | #            | Pin, dowel                           | 2                | 2  | 2  |
| 14   | 223465       | Spring                               | 1                | 1  | 1  |
| 15   | 223507       | Valve                                | 1                | 1  | 1  |
| 16   | 223503       | Cap, bearing                         | 4                | 4  | 4  |
| 17   | #            | Washer                               | 10               | 10 | 10 |
| 18   | 223639       | Screw, cap                           | 10               | 10 | 10 |
| 19   | 223516       | Cap, rear                            | 1                | 1  | 1  |
| 20   | #            | Plug, pipe 3/8 square drive          | 1                | 1  | 1  |
| 21   | 223512       | O-ring                               | 1                | 1  |    |
| 21   | 336458       | O-ring                               |                  |    | 1  |
| 22   | 223638       | Nipple, threaded                     | 1                | 1  | 1  |
| 23   | X            | Orifice (w/piston cooling)           | 4                | 4  | 4  |
| 24   | X            | Block, cylinder (basic)              | 1                | 1  | 1  |
| 25   | See group 42 | Block, cylinder                      | 1                | 1  | 1  |

# Common hardware, procure locally.

X Item not sold separately.

# Group 7: Cylinder Block, continued



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TP55071

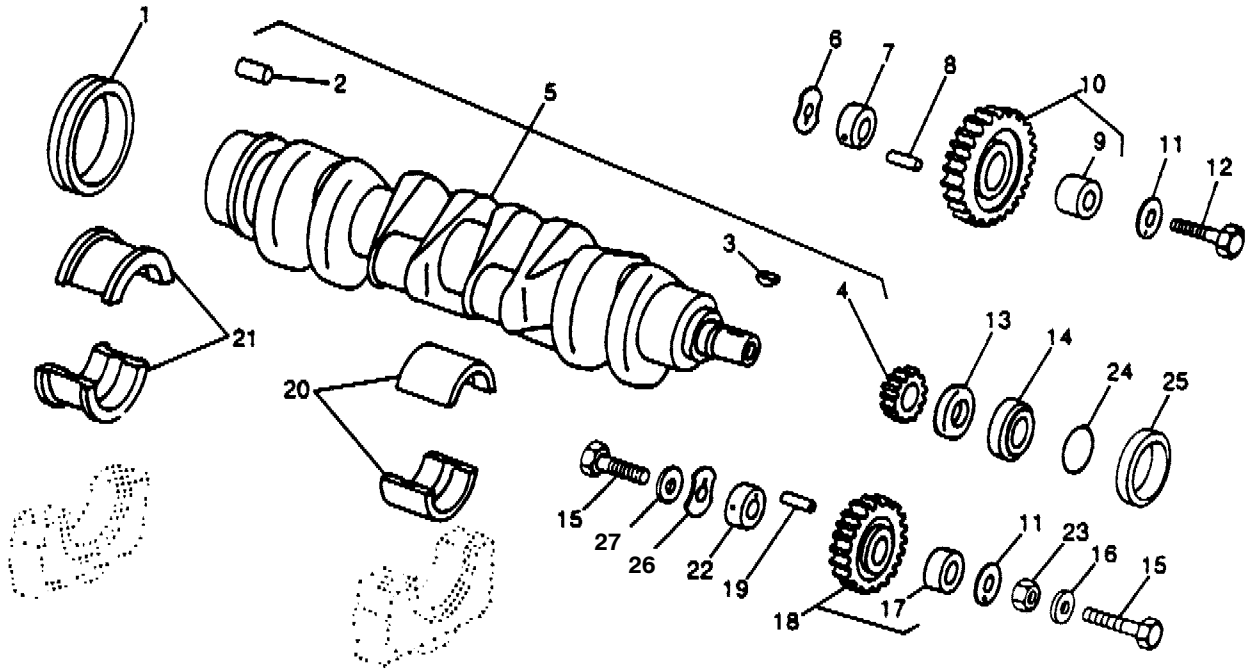
## Group 7: Cylinder Block, continued

| Item | Part Number | Description                         | Quantity         |
|------|-------------|-------------------------------------|------------------|
|      |             |                                     | Variation Number |
| 1    | 223472      | Pin, dowel                          | 2                |
| 2    | #           | Cap                                 | 2                |
| 3    | X           | Block, cylinder (order short block) | 1                |
| 4    | 233802      | Plug, pipe                          | 1                |
| 5    | 224268      | Plug, pipe                          | 5                |
| 6    | 352246      | Bushing, camshaft                   | 1                |
| 7    | 360154      | Plate                               | 1                |
| 8    | #           | Screw, M8 x 25                      | 2                |
| 9    | 360103      | Valve, engine oil bypass            | 1                |
| 10   | 360080      | Spring                              | 1                |
| 11   | 360518      | Bushing, oil pressure regulating    | 1                |
| 12   | 360519      | Bushing, balancer shaft             | 6                |
| 13   | 352064      | Pin, dowel                          | 2                |
| 14   | #           | Plug, pipe                          | 1                |
| 15   | 360087      | Bushing                             | 1                |
| 16   | 223512      | O-ring                              | 1                |
| 17   | 360084      | Cap, bearing                        | 4                |
| 18   | 224089      | Washer                              | 10               |
| 19   | 223639      | Screw                               | 10               |
| 20   | 360151      | Cap, bearing                        | 1                |
| 21   | 360146      | Orifice                             | 4                |
| 22   | 223462      | Plug, drain                         | 2                |
| 23   | 223988      | O-ring                              | 2                |
| 24   | 360173      | Gasket (plastic gasket)             | 1                |
| 25   | 360093      | Plug                                | 1                |
| 26   | #           | Plug, pipe, 1/2"                    | 1                |
| 27   | 223435      | Plug, drain                         | 1                |

# Common hardware, procure locally.

X Item not sold separately.

# Group 8a: Crankshaft



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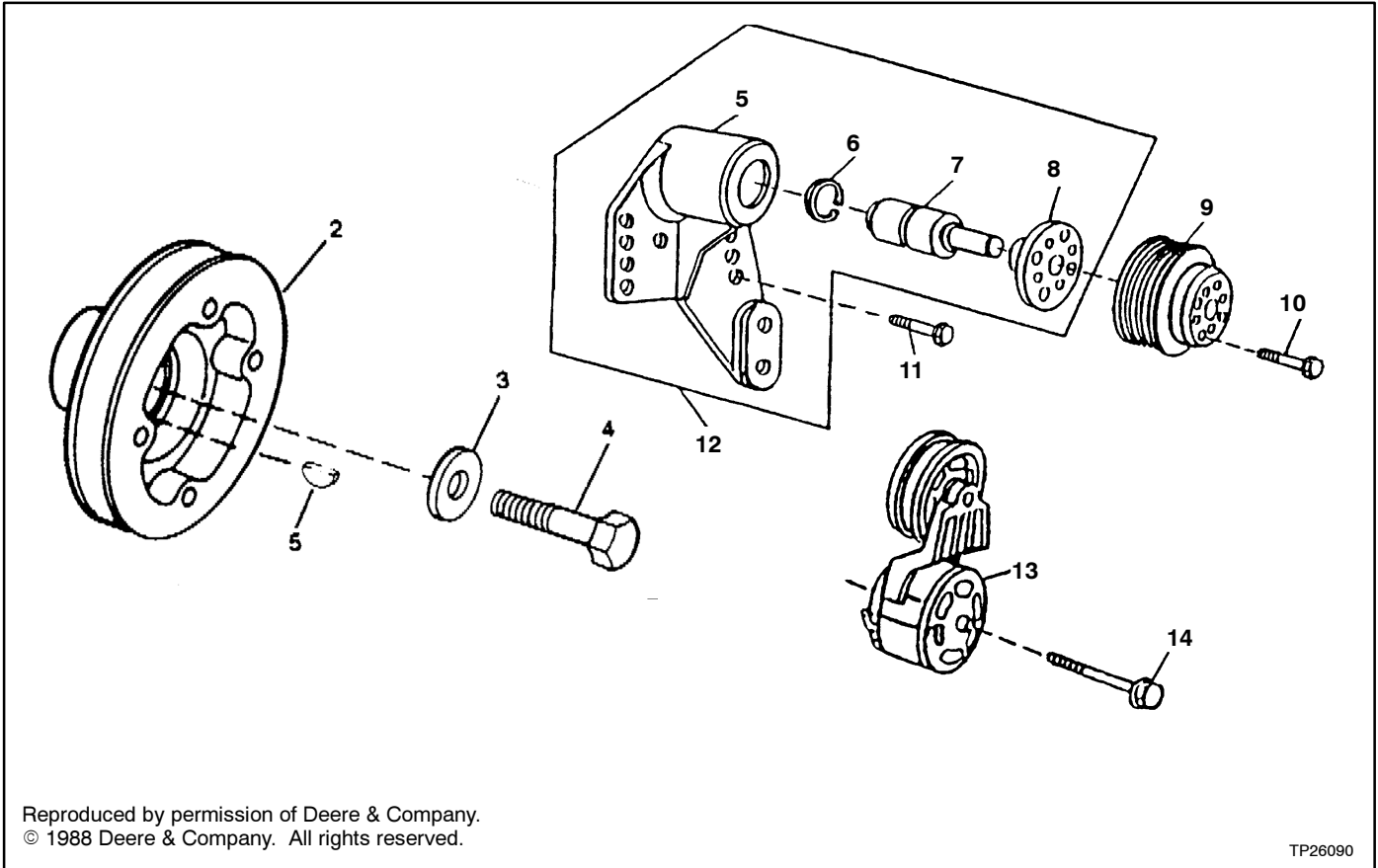
TP26293

# Group 8a: Crankshaft

| Item | Part Number | Description                | Quantity         |   |   |
|------|-------------|----------------------------|------------------|---|---|
|      |             |                            | Variation Number |   |   |
|      |             |                            | 1                | 2 | 3 |
| 1    | 223583      | Seal, oil (rear)           | 1                | 1 | 1 |
| 2    | 223472      | Pin, dowel                 | 1                | 1 | 1 |
| 3    | 223407      | Key, shaft, 1/8 x 5/8"     | 1                | 1 |   |
| 3    | 360503      | Key, shaft                 |                  |   | 1 |
| 4    | 223615      | Gear (24 teeth)            | 1                | 1 |   |
| 4    | 360099      | Gear (30 teeth)            |                  |   | 1 |
| 5    | 224292      | Crankshaft                 | 1                | 1 |   |
| 5    | 360504      | Crankshaft                 |                  |   | 1 |
| 6    | 223649      | Washer, thrust (rear)      | 1                |   |   |
| 6    | 336446      | Washer, thrust (rear)      |                  | 1 |   |
| 7    | 224186      | Pin (shaft)                | 1                | 1 |   |
| 7    | 360101      | Pin (shaft)                |                  |   | 1 |
| 8    | 223408      | Pin, spring 3/16 dia. x 1" | 1                |   |   |
| 8    | 360179      | Pin                        |                  |   | 1 |
| 9    | 223606      | Bushing                    | 1                | 1 |   |
| 10   | 223432      | Gear (55 teeth)            | 1                | 1 |   |
| 10   | 360020      | Gear (w/bushing)           |                  |   | 1 |
| 11   | 223651      | Washer, thrust             | 2                |   |   |
| 11   | 336447      | Washer, thrust             |                  | 2 |   |
| 11   | 360147      | Washer, thrust             |                  |   | 2 |
| 12   | 223652      | Screw                      | 1                | 1 |   |
| 12   | #           | Screw, M10 x 65            |                  |   | 1 |
| 13   | 223607      | Slinger, oil               | 1                | 1 |   |
| 14   | 223422      | Seal, oil (front)          | 1                | 1 |   |
| 15   | 224260      | Screw                      | 2                | 2 |   |
| 15   | #           | Screw, M10 x 50            |                  |   | 1 |
| 16   | 224267      | Washer                     | 1                | 1 |   |
| 16   | 360148      | Washer                     |                  |   | 1 |
| 17   | 223984      | Bushing                    | 1                |   |   |
| 17   | 360082      | Bushing                    |                  |   | 1 |
| 18   | 223729      | Gear (45 teeth)            | 1                | 1 |   |
| 18   | 360021      | Gear                       |                  |   | 1 |
| 19   | #           | Pin, spring, 3/16 x 1-1/8" | 1                |   |   |
| 20   | 223728      | Bearing, std. (set of 2)   | 4                | 4 |   |
| 20   | 360049      | Bearing, std. (set of 2)   |                  |   | 4 |
| 20   | 223719      | Bearing, 0.002" (0.05 mm)  | 4                | 4 |   |
| 20   | 223720      | Bearing, 0.010" (0.25 mm)  | 4                | 4 |   |
| 20   | 360055      | Bearing, 0.010" (0.25 mm)  |                  |   | 4 |
| 20   | 223721      | Bearing, 0.020" (0.51 mm)  | 4                | 4 |   |
| 20   | 223722      | Bearing, 0.030" (0.76 mm)  | 4                | 4 |   |
| 21   | 223727      | Bearing, std. (set of 2)   | 1                | 1 |   |
| 21   | 360050      | Bearing, std. (set of 2)   |                  |   | 1 |
| 21   | 223723      | Bearing, 0.002" (0.05 mm)  | 1                | 1 |   |
| 21   | 223724      | Bearing, 0.010" (0.25 mm)  | 1                | 1 |   |
| 21   | 360056      | Bearing, 0.010" (0.25 mm)  |                  |   | 1 |
| 21   | 223725      | Bearing, 0.020" (0.51 mm)  | 1                | 1 |   |
| 21   | 223726      | Bearing, 0.030" (0.76 mm)  | 1                | 1 |   |
| 22   | 224186      | Pin (shaft)                | 1                | 1 |   |
| 22   | 360083      | Pin (shaft)                |                  |   | 1 |
| 23   | #           | Nut, 1/2-20                | 1                | 1 |   |
| 24   | 224007      | Ring                       | 1                |   |   |
| 25   | 224056      | Sleeve (wear ring)         | 1                |   |   |
| 25   | 360032      | Sleeve                     |                  |   | 1 |
| 26   | 223649      | Washer, thrust (rear)      | 1                |   |   |
| 26   | 336446      | Washer, thrust (rear)      |                  | 1 | 1 |
| 27   | 224267      | Washer                     | 1                | 1 |   |

# Common hardware, procure locally.

# Group 8b: Crankshaft Pulley

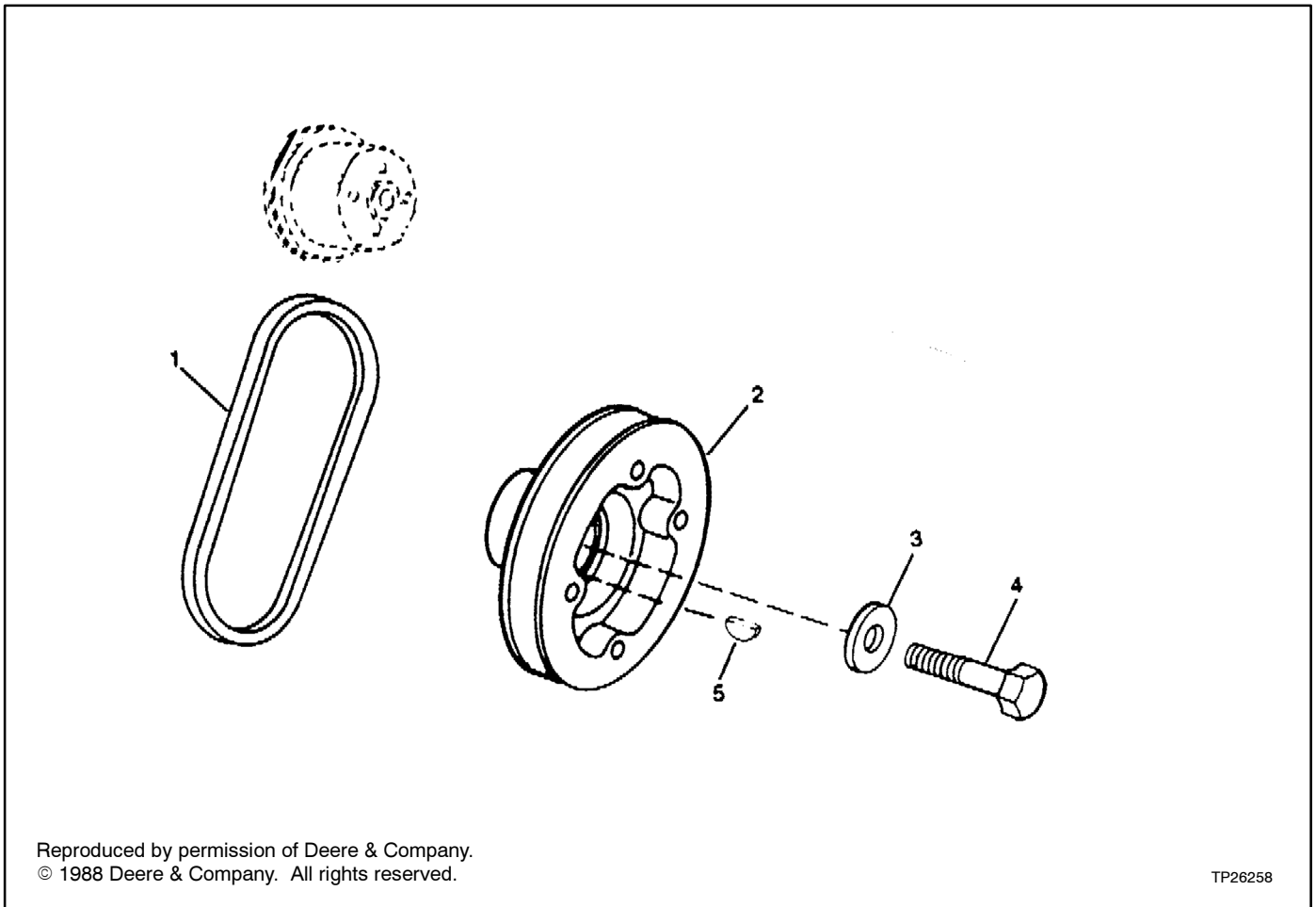


| Item | Part Number | Description                       | Quantity |   |   |
|------|-------------|-----------------------------------|----------|---|---|
|      |             |                                   | 1        | 3 | 5 |
| 1    | 224280      | Pulley                            | 1        |   |   |
| 1    | 336436      | Pulley                            |          | 1 |   |
| 1    | 360576      | Pulley                            |          |   | 1 |
| 2    | #           | Key, shaft 5/16 x 1-1/8" (carbon) | 1        | 1 |   |
| 2    | 224287      | Key                               | 1        | 1 |   |
| 3    | 224265      | Washer                            | 1        | 1 |   |
| 3    | 360577      | Washer                            |          |   | 1 |
| 4    | 223541      | Screw, cap                        | 1        | 1 |   |
| 4    | 360111      | Screw, cap                        |          |   | 1 |
| 5    | X           | Housing                           |          |   | 1 |
| 6    | 360005      | Snap Ring                         |          |   | 1 |
| 7    | 360095      | Bearing                           |          |   | 1 |
| 8    | 360096      | Hub                               |          |   | 1 |
| 9    | 360578      | Pulley                            |          |   | 1 |
| 10   | #           | Screw, M10 x 20                   |          |   | 4 |
| 11   | #           | Screw, M10 x 35                   |          |   | 4 |
| 12   | 360030      | Bearing housing                   |          |   | 1 |
| 13   | 360075      | Tensioner                         |          |   | 1 |
| 14   | #           | Screw, M10 x 65                   |          |   | 1 |

# Common hardware, procure locally.

X Item not sold separately.

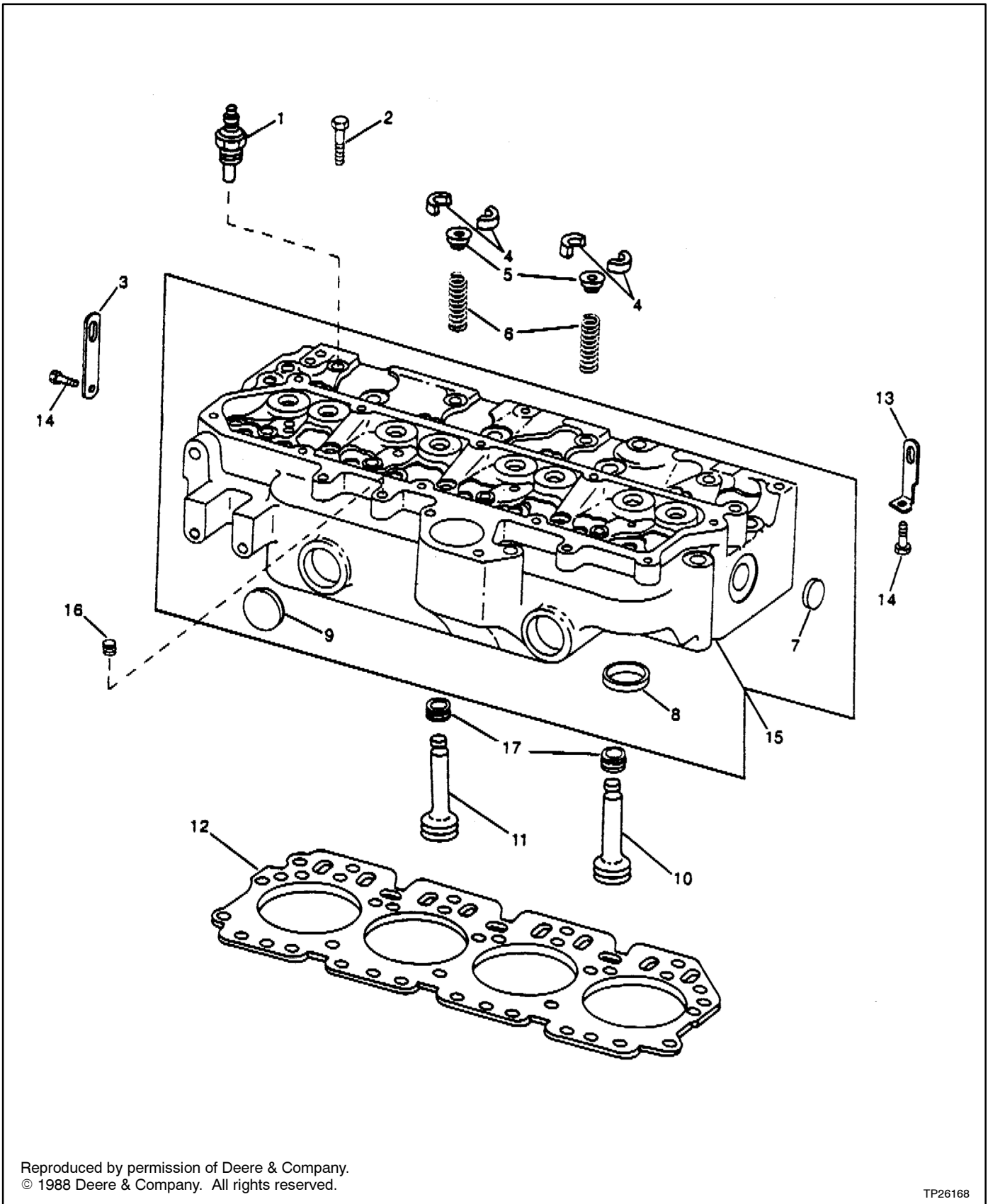
# Group 8b: Crankshaft Pulley, continued



| Item | Part Number  | Description                       | Quantity |   |
|------|--------------|-----------------------------------|----------|---|
|      |              |                                   | 2        | 4 |
| 1    | See Group 2c |                                   |          |   |
| 2    | 224281       | Pulley                            | 1        |   |
| 2    | 336437       | Pulley                            |          | 1 |
| 3    | 224265       | Washer                            | 1        | 1 |
| 4    | 223541       | Screw, cap                        | 1        | 1 |
| 5    | #            | Key, shaft 5/16 x 1-1/8" (carbon) | 1        | 1 |

# Common hardware, procure locally.

# Group 9: Cylinder Head



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TP26168

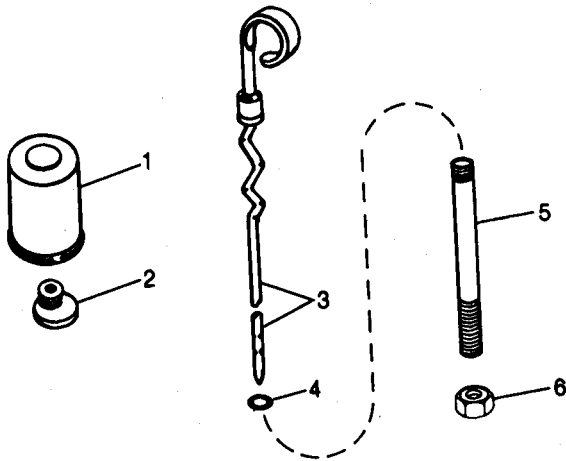
## Group 9: Cylinder Head

| Item | Part Number | Description                       | Quantity         |    |    |
|------|-------------|-----------------------------------|------------------|----|----|
|      |             |                                   | Variation Number |    |    |
|      |             |                                   | 1                | 2  | 3  |
| 1    | not used    | Sender, temperature               |                  |    |    |
| 2    | 224164      | Screw                             | 18               | 18 | 18 |
| 3    | 224337      | Strap                             | 1                | 1  |    |
| 4    | 224184      | Lock                              | 18               | 18 | 18 |
| 5    | 224176      | Rotator                           | 8                | 8  | 8  |
| 6    | 223455      | Spring                            | 8                | 8  | 8  |
| 7    | 223409      | Cap                               | 2                |    |    |
| 7    | 336459      | Cap                               |                  | 2  |    |
| 7    | 223448      | Cap                               |                  |    | 1  |
| 8    | 224162      | Insert, intake valve seat (std.)  | 4                | 4  | 4  |
| 8    | 224289      | Insert, intake valve seat (O/S)   | 4                | 4  | 4  |
| 8    | 224166      | Insert, exhaust valve seat (std.) | 4                | 4  | 4  |
| 8    | 224288      | Insert, exhaust valve seat (O/S)  | 4                | 4  | 4  |
| 9    | 224157      | Cap                               | 2                | 2  | 2  |
| 10   | 224156      | Valve, exhaust (std.)             | 4                | 4  | 4  |
| 10   | 224153      | Valve, exhaust (0.015" O/S)       | 4                | 4  |    |
| 10   | 224151      | Valve, exhaust (0.030" O/S)       | 4                | 4  |    |
| 11   | 224168      | Valve, intake (std.)              | 4                | 4  | 4  |
| 11   | 224193      | Valve, intake (0.015" O/S)        | 4                | 4  |    |
| 11   | 224197      | Valve, intake (0.030" O/S)        | 4                | 4  |    |
| 12   | 223530      | Gasket, cylinder head             | 1                | 1  |    |
| 12   | 360531      | Gasket, cylinder head             |                  |    | 1  |
| 13   | 224284      | Strap                             | 1                | 1  |    |
| 14   | #           | Screw, 1/2 x 1"                   | 2                | 2  |    |
| 15   | 224295      | Head, cylinder                    | 1                | 1  |    |
| 15   | 360532      | Head, cylinder                    |                  |    | 1  |
| 16   | 224268      | Plug, pipe                        | 1                | 1  | 1  |
| 17   | 224243      | Seal                              | 8                | 8  | 8  |
| 17   | 224308      | Seal (0.015" O/S)                 | 8                | 8  |    |
| 17   | 224309      | Seal (0.030" O/S)                 | 8                | 8  |    |
| 18   | 360174      | Fitting (not shown)               |                  |    | 1  |

# Common hardware, procure locally.

# Group 10: Oil Filter and Dipstick

Engine model 4039 only.

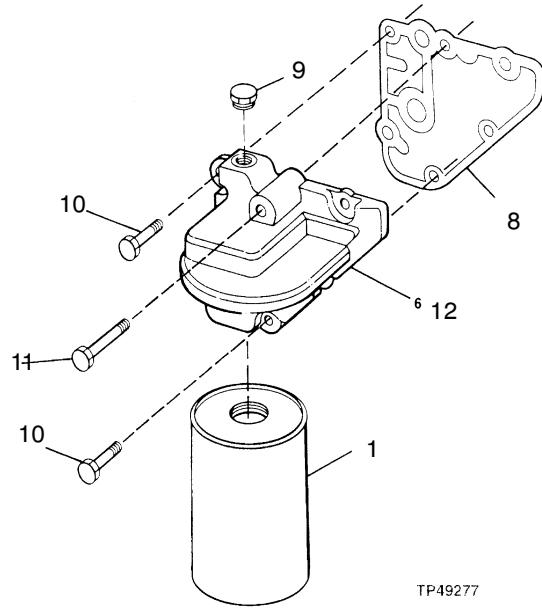


Use engine model and serial number to verify the dipstick on 4039 engine models.

Find your engine model and serial number on the engine nameplate and choose the dipstick from the chart below.

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Engine model 4045 only.



TP49277

TP16416

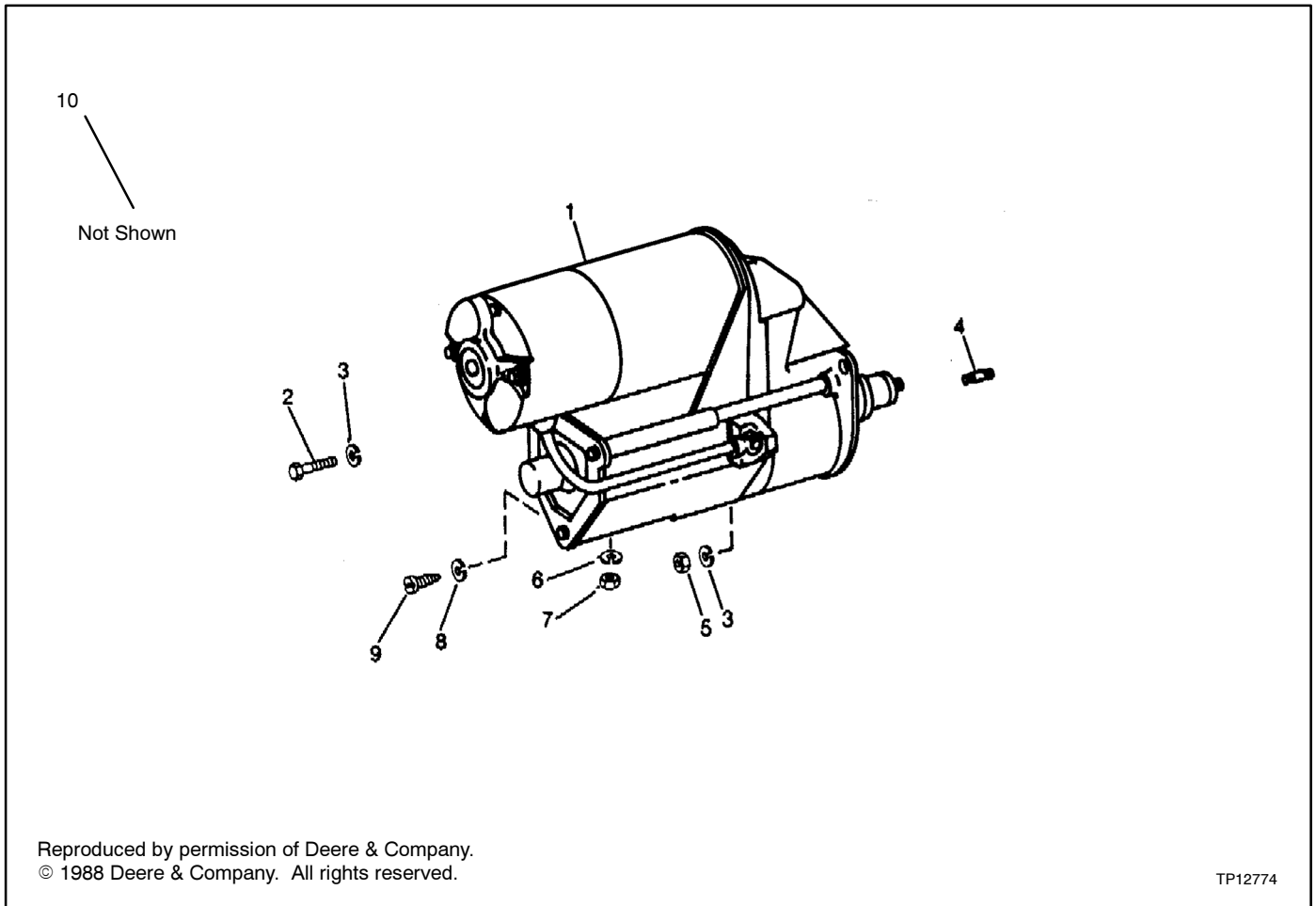
| Item | Part Number | Description                              | Quantity         |   |   |
|------|-------------|--|------------------|---|---|
|      |             |  | Variation Number |   |   |
|      |             |  | 1                | 2 | 3 |
| 1    | 223604      | Filter, oil                              | 1                | 1 |   |
| 1    | 360031      | Filter, oil                              |                  |   | 1 |
| 2    | 223638      | Nipple, threaded                         | 1                | 1 |   |
| 3    | See Table   | Dipstick                                 | 1                | 1 | 1 |
| 4    | 223454      | O-ring                                   | 1                | 1 | 1 |
| 5    | 223502      | Nipple, threaded (4039D)                 | 1                | 1 |   |
| 5    | 223542      | Nipple, threaded (CD4039TF below 181857) |                  | 1 |   |
| 5    | 336586      | Guide (CD4039TF 181857 and above)        |                  | 1 |   |
| 5    | 360144      | Dipstick tube                            |                  |   | 1 |
| 6    | #           | Nut, 1/2"                                | 1                | 1 |   |
| 7    | 360522      | Plug (not shown)                         |                  |   | 1 |
| 8    | 360133      | Gasket                                   |                  |   | 1 |
| 9    | 360016      | Plug                                     |                  |   | 2 |
| 10   | #           | Screw, M8 x 65                           |                  |   | 5 |
| 11   | #           | Screw, M8 x 20                           |                  |   | 1 |
| 12   | 360033      | Adapter                                  |                  |   | 1 |

# Common hardware, procure locally.

## Serial Number-Contingent Dipsticks

| Engine   | Serial Number    | Dipstick Part Number |
|----------|------------------|----------------------|
| 4039D    | 3xxxxxx          | 223429               |
| CD4039DF | below 181857     | 336449               |
| CD4039DF | 181857 and above | 223443               |
| 4039T    | 3xxxxxx          | 223429               |
| CD4039TF | 1xxxxxx          | 223443               |

# Group 11a: Starter Motor

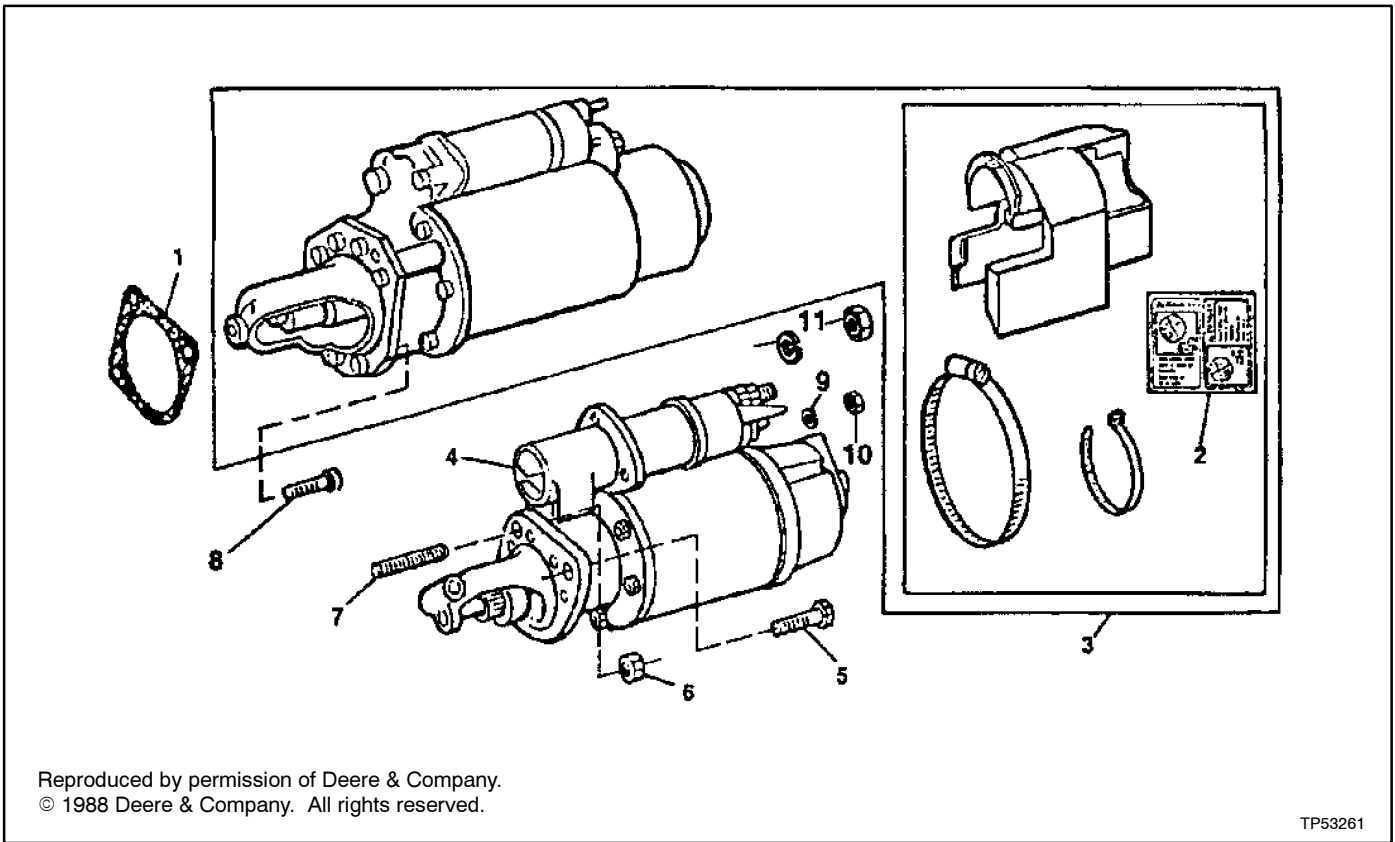


| Item | Part Number | Description                          | Quantity         |
|------|-------------|--------------------------------------|------------------|
|      |             |                                      | Variation Number |
| 1    | 224327      | Kit (includes starter and cover kit) | 1                |
| 1    | X           | Motor, starter (rebuilt)             | 1                |
| 2    | #           | Screw, 3/8-16 x 1-1/4" cap           | 2                |
| 3    | #           | Washer, 3/8" lock                    | 1                |
| 4    | 224264      | Stud                                 | 1                |
| 5    | #           | Nut, 3/8-16                          | 1                |
| 6    | #           | Washer, M10 lock                     | 1                |
| 7    | #           | Nut, M10                             | 1                |
| 8    | #           | Washer, M5 lock                      | 1                |
| 9    | #           | Screw, M5 x 10                       | 1                |
| 10   | X           | Shield (solenoid cover kit)          | 1                |

# Common hardware, procure locally.

X Item not sold separately.

# Group 11a: Starter Motor, continued

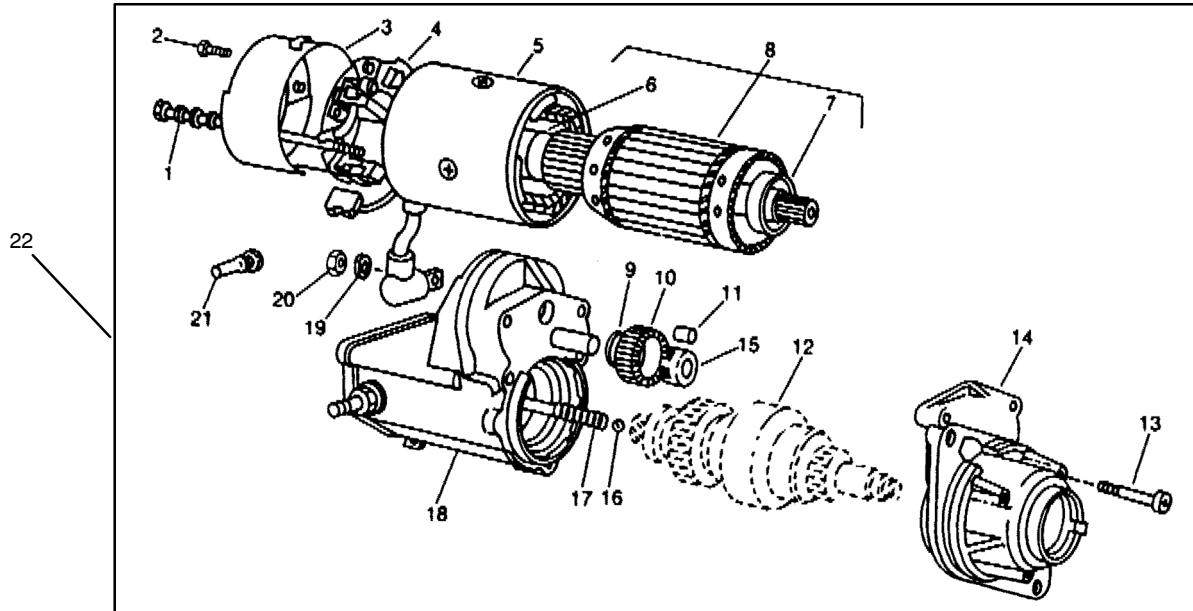


| Item | Part Number | Description     | Quantity    |             |
|------|-------------|-----------------|-------------|-------------|
|      |             |                 | Variation 2 | Variation 3 |
| 1    | 223791      | Gasket          | 1           | 1           |
| 2    | X           | Label           | 1           | 1           |
| 3    | 360564      | Starting motor  | 1           | 1           |
| 3    | 360565      | Starting motor  |             | 1           |
| 4    |             | Use Item 3      | 1           | 1           |
| 5    | #           | Screw, M10 x 30 | 1           | 1           |
| 5    | #           | Screw, M10 x 30 | 1           | 1           |
| 6    | #           | Flange Nut, M10 | 1           | 1           |
| 7    | #           | Stud            | 1           | 1           |

# Common hardware, procure locally.

X Item not sold separately.

# Group 11b: Starter Motor Components



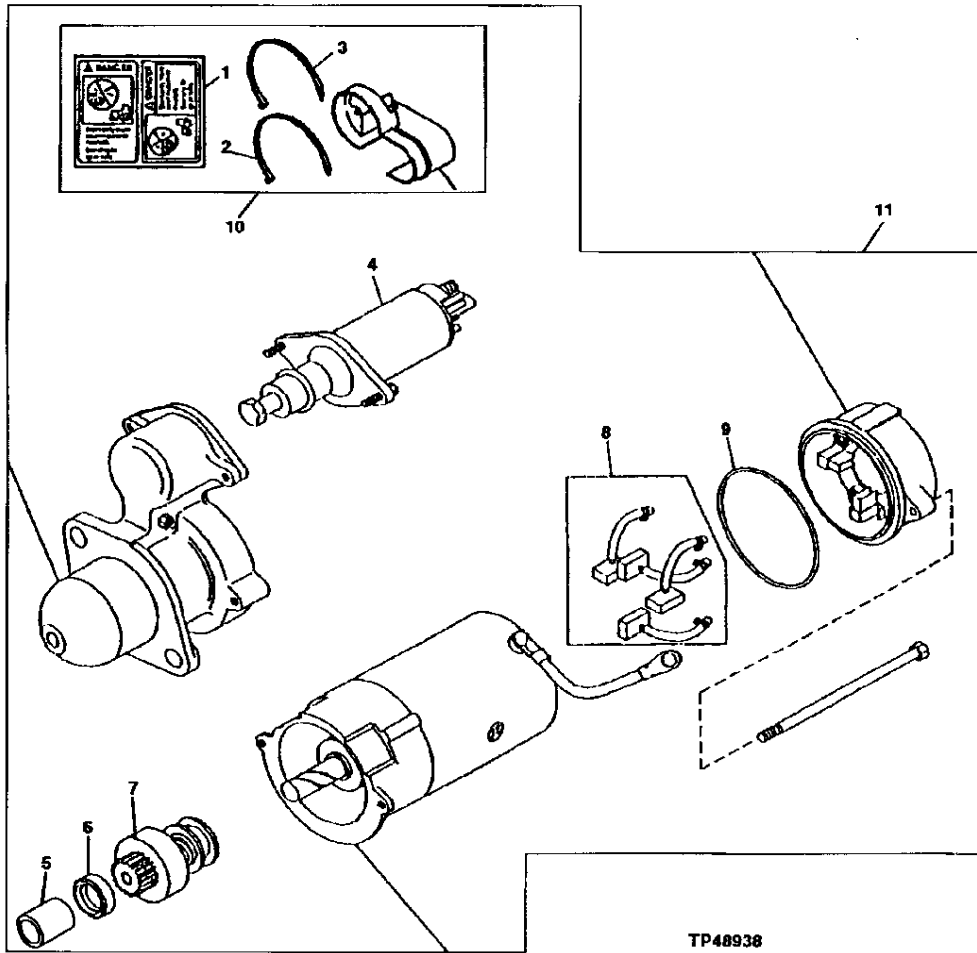
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TP17980

| Item | Part Number | Description                        | Quantity         |
|------|-------------|------------------------------------|------------------|
|      |             |                                    | Variation Number |
| 1    | X           | Bolt                               | 2                |
| 2    | X           | Screw                              | 2                |
| 3    | X           | Frame                              | 1                |
| 4    | X           | Holder                             | 1                |
| 5    | X           | Yoke                               | 1                |
| 6    | X           | Bearing, ball                      | 1                |
| 7    | X           | Bearing, ball                      | 1                |
| 8    | X           | Armature                           | 1                |
| 9    | X           | Washer                             | 1                |
| 10   | X           | Pinion                             | 1                |
| 11   | X           | Roller                             | 5                |
| 12   | 223580      | Clutch                             | 1                |
| 13   | X           | Screw                              | 3                |
| 14   | X           | Housing                            | 1                |
| 15   | X           | Retainer                           | 1                |
| 16   | X           | Ball                               | 1                |
| 17   | X           | Spring                             | 1                |
| 18   | X           | Switch                             | 1                |
| 19   | X           | Washer                             | 1                |
| 20   | X           | Nut                                | 1                |
| 21   | X           | Cover                              | 1                |
| 22   | 224327      | Kit (includes starter & cover kit) | 1                |
| 22   | X           | Starter (rebuilt)                  | 1                |

X Item not sold separately.

# Group 11b: Starter Motor Components, continued



TP48938

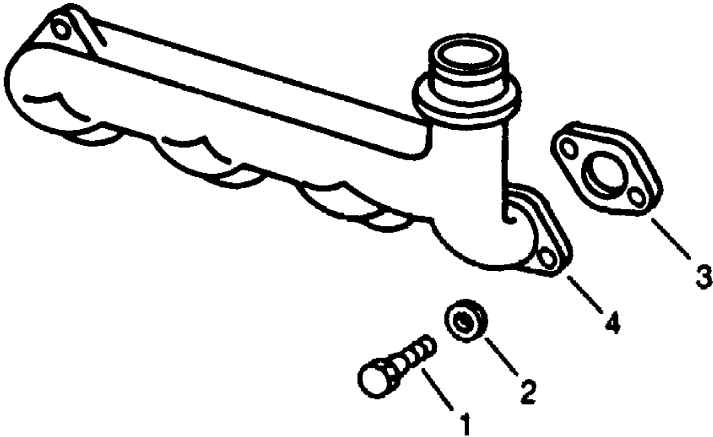
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TP48938

| Item | Part Number | Description             | Quantity         |   |
|------|-------------|-------------------------|------------------|---|
|      |             |                         | Variation Number |   |
|      |             |                         | 2                | 3 |
| 1    | X           | Label                   | 1                | 1 |
| 2    | X           | Tie                     | 1                | 1 |
| 3    | X           | Tie                     | 1                | 1 |
| 4    | 360566      | Switch, solenoid        | 1                |   |
| 4    | 360573      | Switch, solenoid        |                  | 1 |
| 5    | 360567      | Bushing                 | 1                | 1 |
| 6    | 360568      | Stop                    | 1                | 1 |
| 7    | 360569      | Bendix Drive            | 1                |   |
| 7    | 360574      | Bendix Drive            |                  | 1 |
| 8    | 360570      | Brush kit               | 1                |   |
| 8    | 360575      | Brush kit               |                  | 1 |
| 9    | 360571      | O-ring                  | 1                | 1 |
| 10   | 360572      | Solenoid protection kit | 1                | 1 |
| 11   | 360564      | Starter                 | 1                |   |
| 11   | 360565      | Starter                 |                  | 1 |

X Item not sold separately.

# Group 12a: Exhaust Manifold



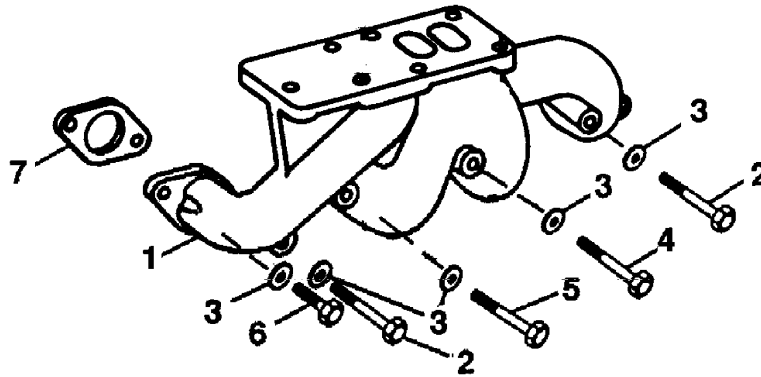
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TP12126

| Item | Part Number | Description                         | Quantity    |             |
|------|-------------|-------------------------------------|-------------|-------------|
|      |             |                                     | Variation 1 | Variation 3 |
| 1    | #           | Screw, 3/8-16 x 1-1/4" cap          | 8           |             |
| 1    | #           | Screw, M10 x 80                     |             | 8           |
| 2    | #           | Washer, 13/32 x 23/32 x 0.12" plain | 7           |             |
| 3    | 223547      | Gasket                              | 4           | 4           |
| 4    | 223623      | Manifold, exhaust                   | 1           |             |
| 4    | 360533      | Manifold, exhaust                   |             | 1           |

# Common hardware, procure locally.

# Group 12a: Exhaust Manifold, continued



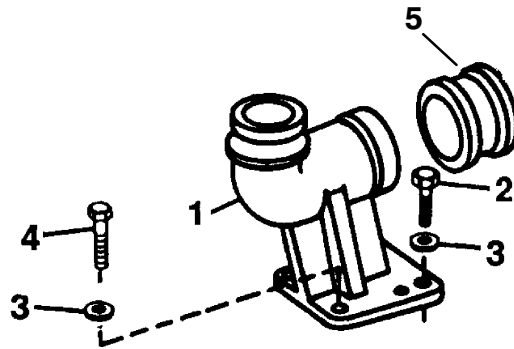
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TP26831  
 (was TP25160)

| Item | Part Number | Description                         | Quantity         |   |
|------|-------------|-------------------------------------|------------------|---|
|      |             |                                     | Variation Number |   |
|      |             |                                     | 2                | 4 |
| 1    | 223478      | Manifold, exhaust                   | 1                |   |
| 1    | 360534      | Manifold, exhaust                   |                  | 1 |
| 2    | #           | Screw, 3/8-16 x 4-1/4" cap          | 2                |   |
| 2    | #           | Screw, M10 x 80                     |                  | 2 |
| 3    | #           | Washer, 13/32 x 23/32 x 0.12" plain | 7                |   |
| 4    | #           | Screw, 3/8-16 x 4" cap              | 1                |   |
| 4    | #           | Screw, M10 x 80                     |                  | 1 |
| 5    | #           | Screw, 3/8-16 x 5" cap              | 2                |   |
| 5    | #           | Screw, M10 x 80                     |                  | 2 |
| 6    | #           | Screw, 3/8-16 x 1-1/4"              | 3                |   |
| 6    | #           | Screw, M10 x 80                     |                  | 3 |
| 7    | 223547      | Gasket                              | 4                | 4 |

# Common hardware, procure locally.

# Group 12b: Exhaust Elbow



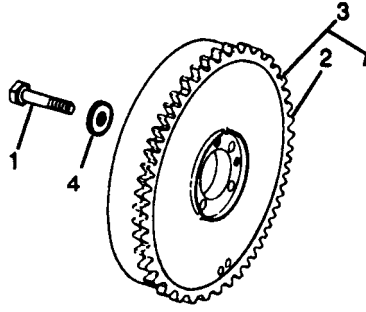
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TP26809  
(was TP25160)

| Item | Part Number | Description                  | Quantity |   |
|------|-------------|------------------------------|----------|---|
|      |             |                              | 2        | 3 |
| 1    | 223495      | Fitting, elbow               | 1        |   |
| 1    | 360117      | Elbow                        |          | 1 |
| 2    | #           | Screw, 3/8-16 x 1-1/2" Gr. 8 | 2        |   |
| 2    | #           | Screw, M10 x 40              |          | 2 |
| 2    | #           | Flange Nut, M10 (not shown)  |          | 2 |
| 3    | #           | Washer, 13/32 x 13/16 x .06" | 4        |   |
| 4    | 224271      | Screw                        | 2        |   |
| 4    | #           | Screw, M10 x 40              |          | 2 |
| 4    | #           | Flange Nut, M10 (not shown)  |          | 2 |
| 5    | 223538      | Adapter                      | 1        |   |
| 5    | 223891      | Adapter                      |          | 1 |
| 6    | 224132      | Clamp (not shown)            |          | 1 |

# Common hardware, procure locally.

# Group 13a: Flywheel



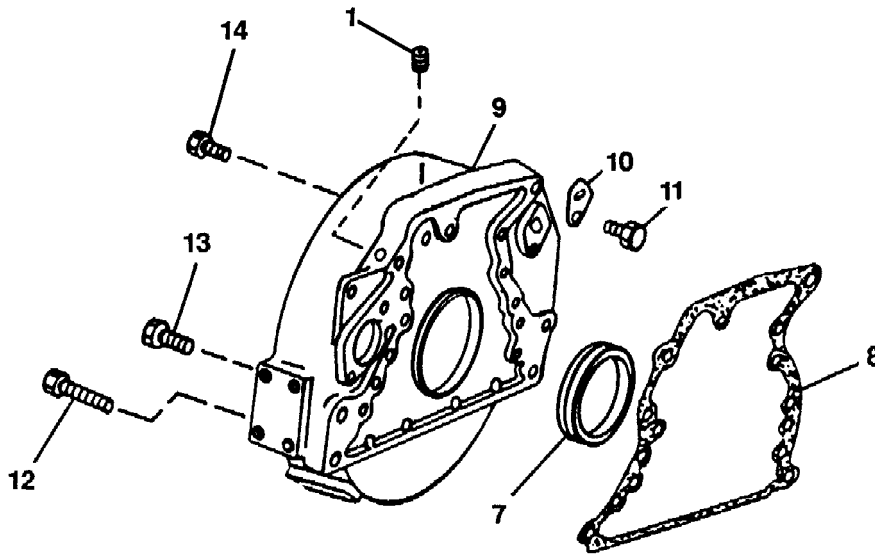
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TP26795

| Item | Part Number | Description                  | Quantity         |   |
|------|-------------|------------------------------|------------------|---|
|      |             |                              | Variation Number |   |
|      |             |                              | 1                | 2 |
| 1    | #           | Screw, 1/2-13 x 1-1/2" Gr. 8 | 4                |   |
| 1    | #           | Bolt                         |                  | 6 |
| 2    | 223613      | Gear (142 teeth)             | 1                | 1 |
| 3    | 224293      | Flywheel                     | 1                |   |
| 3    | 360579      | Flywheel                     |                  | 1 |
| 4    | 223983      | Washer                       | 4                |   |

# Common hardware, procure locally.

# Group 13b: Flywheel Housing



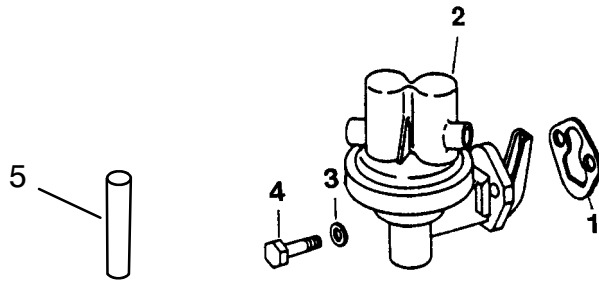
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TP26793  
(was TP25770)

| Item | Part Number | Description                   | Quantity |   |   |
|------|-------------|-------------------------------|----------|---|---|
|      |             |                               | 1        | 2 | 3 |
| 1    | #           | Plug, pipe, 1/8 NPT           | 1        | 1 |   |
| 7    | 223583      | Seal                          | 1        |   | 1 |
| 8    | 223558      | Gasket                        | 1        | 1 |   |
| 9    | 224290      | Housing, flywheel             | 1        | 1 |   |
| 9    | 360580      | Housing, flywheel             |          |   | 1 |
| 10   | 223614      | Cover                         | 1        |   |   |
| 10   | 336438      | Cover, timing tool hole       |          | 1 |   |
| 10   | 360582      | Plug                          |          |   | 1 |
| 11   | #           | Screw, 1/2 x 1/2" cap         | 1        |   |   |
| 12   | #           | Screw, 5/8 x 5-1/2            | 2        | 2 |   |
| 12   | #           | Screw, M12 x 130              |          |   | 2 |
| 13   | #           | Screw, 3/8-16 x 1-1/2", Gr. 8 | 8        |   |   |
| 13   | #           | Screw, 3/8 x 1-3/8"           |          | 8 |   |
| 13   | 360581      | Bolt                          |          |   | 8 |
| 13   | 360175      | Washer                        |          |   | 8 |
| 14   | #           | Screw, 5/8 x 2-1/2", Gr. 8    | 2        |   |   |
| 14   | #           | Screw, 5/8 x 2-1/4", Gr. 8    |          | 2 |   |
| 14   | #           | Screw, M12 x 50               |          |   | 2 |

# Common hardware, procure locally.

# Group 14: Fuel Pump



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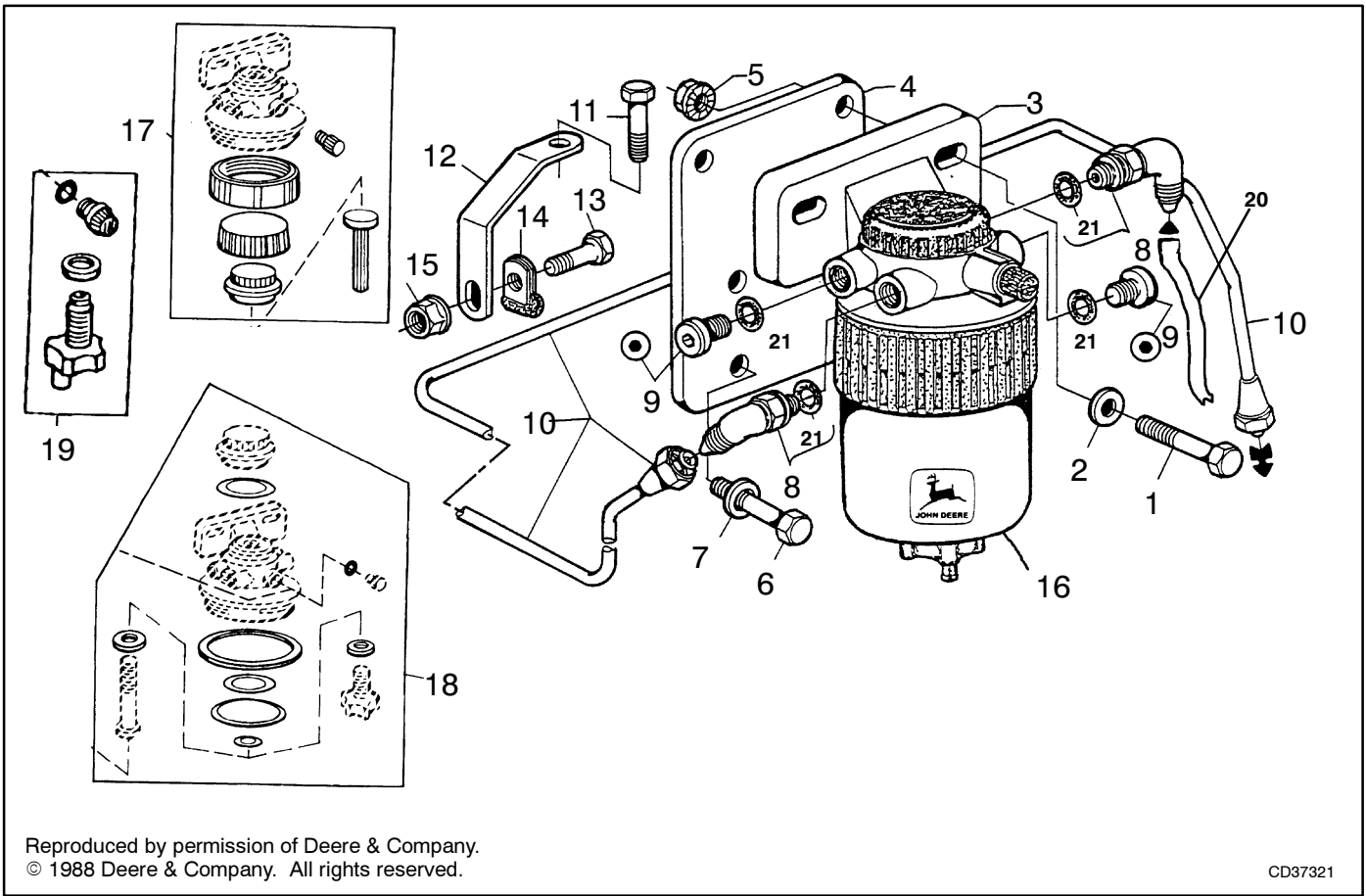
TP26808  
 (was R21292N)

| Item | Part Number | Description                    | Quantity         |   |   |
|------|-------------|--------------------------------|------------------|---|---|
|      |             |                                | Variation Number |   |   |
|      |             |                                | 1                | 2 | 3 |
| 1    | 223557      | Gasket                         | 1                |   |   |
| 2    | 223585      | Pump, fuel (order item 1 also) | 1                |   |   |
| 2    | 360071      | Pump, fuel                     |                  | 1 |   |
| 3    | 224338      | Washer, aluminum               | 2                |   |   |
| 3    | #           | Washer, 8.4 x 16 x 1.6 mm      |                  | 2 |   |
| 4    | #           | Screw, 5/16-18 x 1-1/4" cap    | 2                |   |   |
| 4    | #           | Screw, cap                     |                  | 2 |   |
| 5    | 360159      | Push rod                       |                  |   | 1 |

# Common hardware, procure locally.

# Notes

# Group 15: Fuel Filter



# Group 15: Fuel Filter

| Item | Part Number | Description                     | Quantity           |                    |
|------|-------------|---------------------------------|--------------------|--------------------|
|      |             |                                 | Variation Number 2 | Variation Number 3 |
| 1    | #           | Screw, 3/8 x 1 1/2"             | 2                  | 2                  |
| 1    | #           | Screw, M10 x 25                 |                    | 1                  |
| 2    | #           | Washer, 3/8"                    | 1                  |                    |
| 3    | 336551      | Housing, fuel filter            |                    | 1                  |
| 3    | 336969      | Filter head                     | 1                  |                    |
| 4    | 336547      | Bracket                         | 1                  |                    |
| 5    | #           | Lock nut, 3/8"                  | 2                  |                    |
| 6    | #           | Screw, 3/8" x 7/8"              | 2                  |                    |
| 7    | #           | Washer, 3/8"                    | 2                  |                    |
| 8    | 336550      | Fitting, elbow                  | 2                  |                    |
| 8    | 360037      | Fitting                         |                    | 2                  |
| 9    | #           | Plug, 0.703 x 0.490"            | 2                  |                    |
| 9    | 360563      | Plug                            |                    | 2                  |
| 10   | 336546      | Line, fuel inlet                | 1                  |                    |
| 10   | 360025      | Line, fuel                      |                    | 1                  |
| 11   | #           | Screw, 3/8 x 2"                 | 1                  |                    |
| 11   | #           | Screw, M8 x 16                  |                    | 1                  |
| 12   | 336548      | Bracket                         | 1                  |                    |
| 12   | 360088      | Bracket                         |                    | 1                  |
| 13   | #           | Screw, 5/16 x 3/4"              | 1                  |                    |
| 14   | 336549      | Clamp                           | 1                  |                    |
| 14   | 360171      | Clamp                           |                    | 1                  |
| 15   | #           | Flange nut, 5/16"               | 1                  |                    |
| 15   | #           | Flange nut, M8                  |                    | 1                  |
| 16   | 224795      | Filter, fuel                    | 1                  |                    |
| 16   | 275501      | Filter, fuel                    |                    | 1                  |
| 17   | 222773      | Kit, fuel filter                | 1                  | 1                  |
| 18   | 222772      | Kit, fuel filter seal           | 1                  | 1                  |
| 19   | 360048      | Kit, bleed plug and drain valve | 1                  | 1                  |
| 20   | 275502      | Line, fuel                      |                    | 1                  |
| 21   | 360178      | O-ring                          |                    | 1                  |

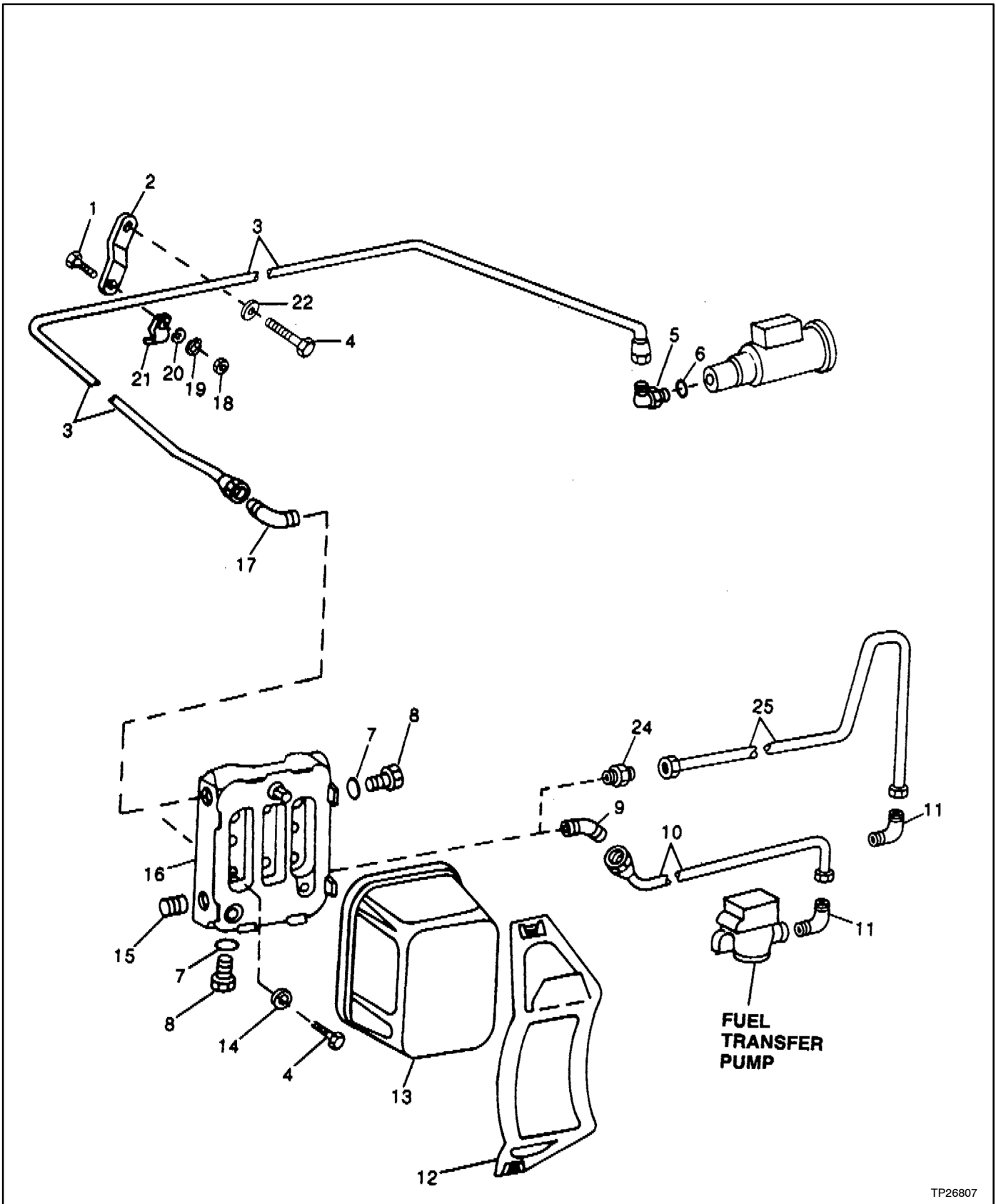
# Common hardware, procure locally.

Use serial number to verify the correct fuel filter type on 4039 engine models. Find your serial number on the nameplate and choose the fuel filter type from the chart below. Square filter (variation 1) is shown on the following page.

### Serial Number-Contingent Fuel Filters

| Model     | Serial Number     | Fuel Filter Type |
|-----------|-------------------|------------------|
| 20-40ROZJ | 334216 and before | square           |
|           | after 334216      | round            |
| 50/60ROZJ | 334607 and before | square           |
|           | after 334607      | round            |

# Group 15: Fuel Filter, continued

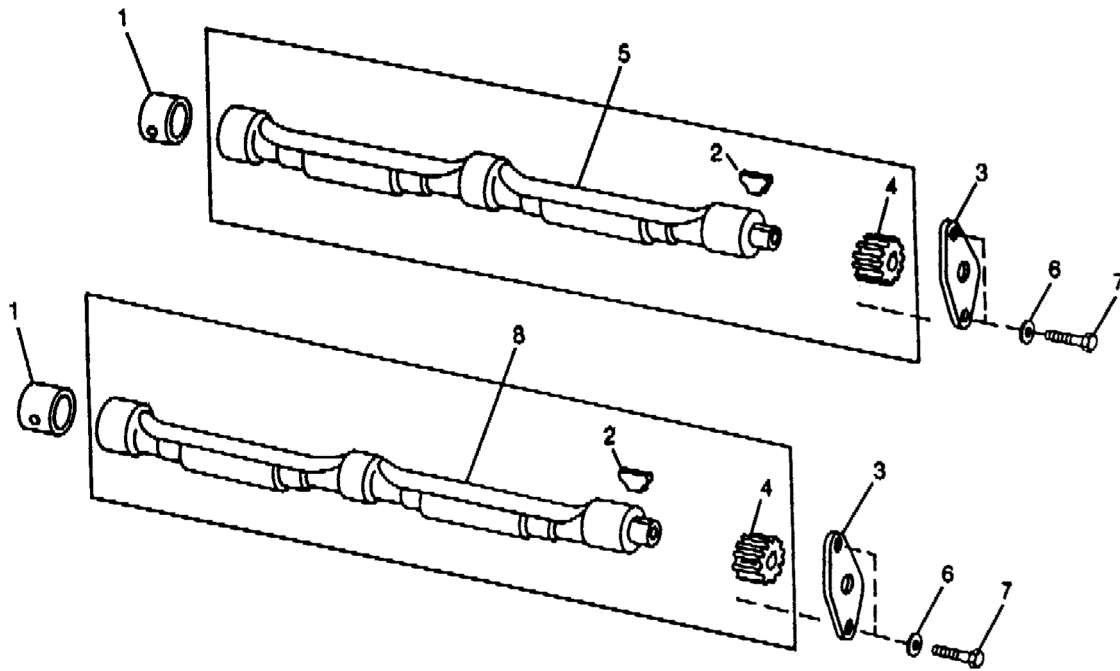


## Group 15: Fuel Filter, continued

| Item | Part Number | Description                           | Quantity         |
|------|-------------|---------------------------------------|------------------|
|      |             |                                       | Variation Number |
| 1    | #           | Screw, 5/16-18 x 3/4"                 | 1                |
| 2    | 223492      | Strap                                 | 1                |
| 3    | 224298      | Line, fuel (filter to injection pump) | 1                |
| 4    | #           | Screw, 3/8-16 x 7/8"                  | 3                |
| 5    | 223447      | Fitting, elbow                        | 3                |
| 6    | 223456      | O-ring                                | 1                |
| 7    | 224010      | Washer                                | 2                |
| 8    | 223467      | Plug, drain                           | 1                |
| 9    | 223534      | Fitting, elbow                        | 1                |
| 10   | 224296      | Line, fuel (transfer pump to filter)  | 1                |
| 11   | 223534      | Fitting, elbow                        | 1                |
| 12   | 223505      | Clamp                                 | 1                |
| 13   | 223414      | Filter, fuel (square)                 | 1                |
| 14   | #           | Washer, 13/32 x 23/32 x 0.120"        | 2                |
| 15   | #           | Plug, 1/8 NPT pipe                    | 1                |
| 16   | 223413      | Housing                               | 1                |
| 17   | 223646      | Fitting, hose                         | 1                |
| 18   | #           | Nut, 5/16-18                          | 1                |
| 19   | #           | Washer, 5/16" lock                    | 1                |
| 20   | #           | Washer, 13/32 x 11/16 x .06"          | 1                |
| 21   | 223655      | Clamp                                 | 1                |
| 22   | #           | Washer, 3/8" lock                     | 1                |
| 23   | 223646      | Fitting, hose                         | 1                |
| 24   | 223457      | Fitting                               | 1                |
| 25   | 224297      | Line, fuel                            | 1                |

# Common hardware, procure locally.

# Group 16: Balancer Shafts



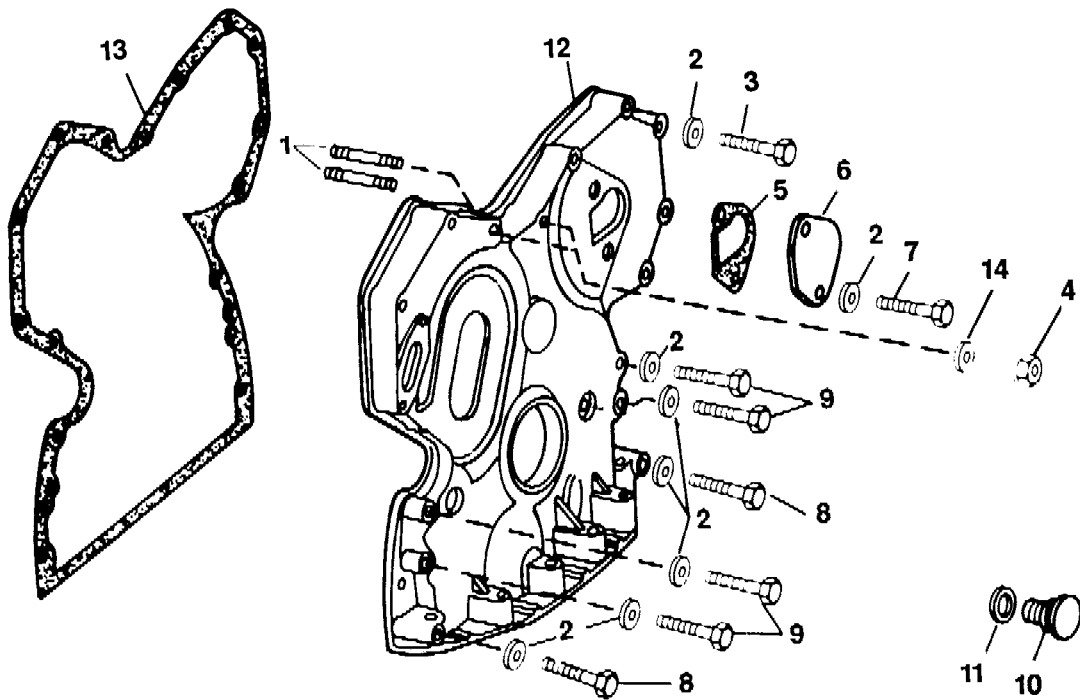
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TP25610

| Item | Part Number | Description                  | Quantity |   |   |
|------|-------------|------------------------------|----------|---|---|
|      |             |                              | 2        | 3 | 4 |
| 1    | 223494      | Bushing (std.)               | 6        | 6 |   |
| 1    | 360519      | Bushing (std.)               |          |   | 6 |
| 1    | 223550      | Bushing (O/S)                | 6        | 6 |   |
| 2    | 223654      | Key, shaft                   | 1        | 1 |   |
| 2    | #           | Key, shaft 4 x 16 mm         |          |   | 2 |
| 3    | 223622      | Stop (plate)                 | 2        |   |   |
| 3    | 336470      | Stop (plate)                 |          | 2 |   |
| 3    | 360547      | Plate                        |          |   | 2 |
| 4    | 223618      | Gear, RH (12 teeth)          | 1        | 1 |   |
| 4    | 223619      | Gear, LH (12 teeth) (pinion) | 1        | 1 |   |
| 4    | 360100      | Gear, LH (15 teeth)          |          |   | 1 |
| 5    | 223416      | Shaft, RH                    | 1        |   |   |
| 5    | 336468      | Shaft, RH                    |          | 1 |   |
| 5    | 360550      | Shaft, RH                    |          |   | 1 |
| 6    | #           | Washer, 3/8" lock            | 4        | 4 |   |
| 7    | #           | Screw, 3/8-16 x 5/8" cap     | 4        | 4 |   |
| 7    | #           | Screw, M8 x 12               |          |   | 4 |
| 8    | 223417      | Shaft, LH                    | 1        |   |   |
| 8    | 336469      | Shaft, LH                    |          | 1 |   |
| 8    | 360548      | Shaft, LH                    |          |   | 1 |

# Common hardware, procure locally.

# Group 18: Timing Gear Cover



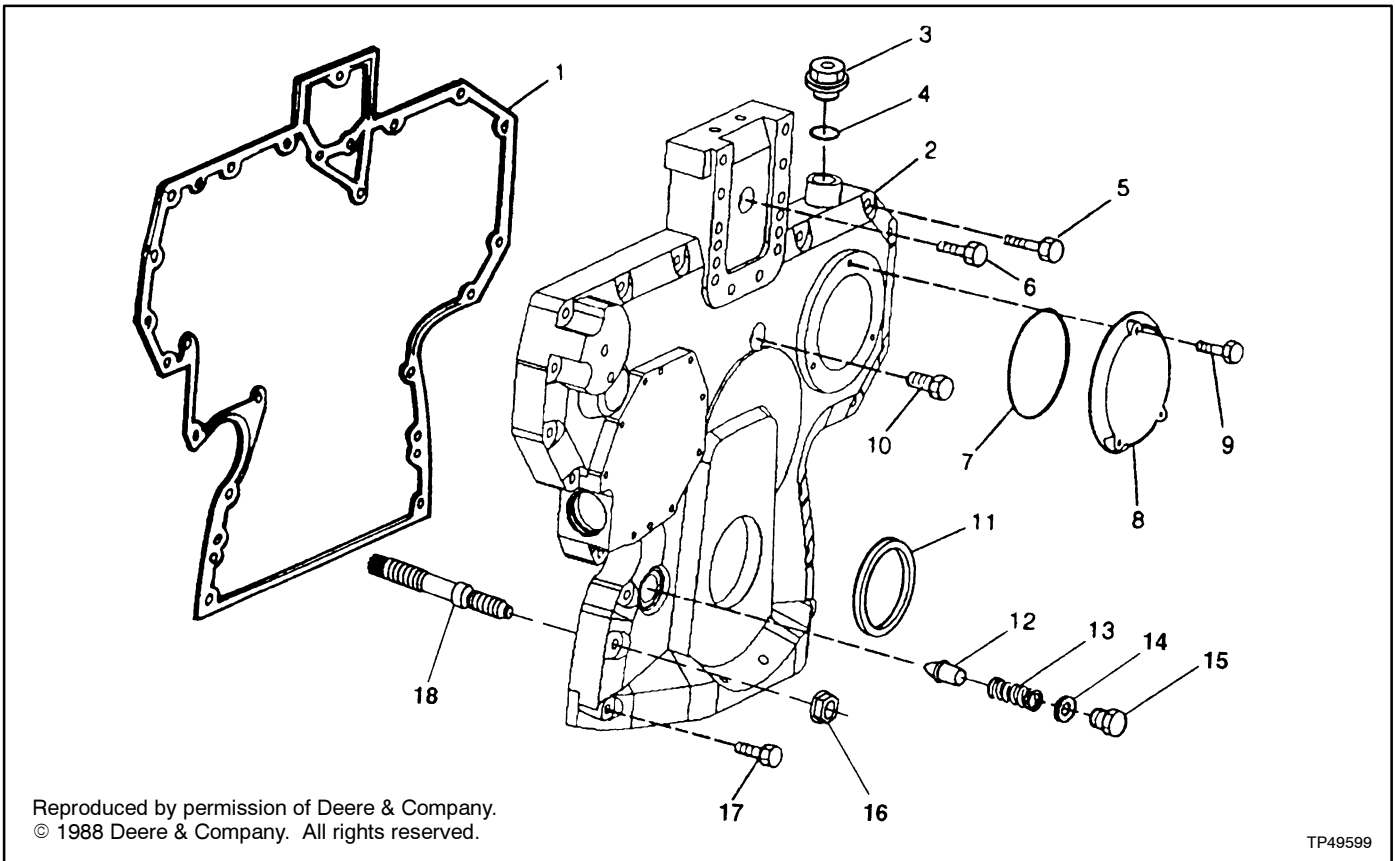
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TP26827  
 (was TP22840)

| Item | Part Number | Description                   | Quantity |    |
|------|-------------|-------------------------------|----------|----|
|      |             |                               | 1        | 2  |
| 1    | 223662      | Stud                          | 2        | 2  |
| 2    | #           | Washer, 13/32 x 23/32 x 0.12" | 16       | 16 |
| 3    | #           | Screw, 3/8-16 x 1-7/8" cap    | 10       | 10 |
| 4    | #           | Nut, 3/8-16                   | 2        | 2  |
| 5    | 223515      | Gasket                        | 1        | 1  |
| 6    | 223637      | Cover                         | 1        | 1  |
| 6    | 336453      | Cover                         |          | 1  |
| 7    | #           | Screw, 3/8-16 x 7/8" cap      | 2        | 2  |
| 8    | #           | Screw, 3/8-16 x 2-1/2" cap    | 2        | 2  |
| 9    | #           | Screw, 3/8-16 x 1-7/8" cap    | 1        | 1  |
| 10   | 223653      | Plug, fitting                 | 1        |    |
| 10   | 336454      | Plug, fitting                 | 1        |    |
| 11   | 223410      | Washer, aluminum (seal)       | 1        | 1  |
| 12   | 223586      | Cover (w/inserts)             | 1        |    |
| 12   | 336451      | Cover (w/inserts)             |          | 1  |
| 13   | 223620      | Gasket                        | 1        |    |
| 13   | 336452      | Gasket                        |          | 1  |
| 14   | #           | Washer, 3/8" lock             | 2        | 2  |

# Common hardware, procure locally.

# Group 18: Timing Gear Cover, continued

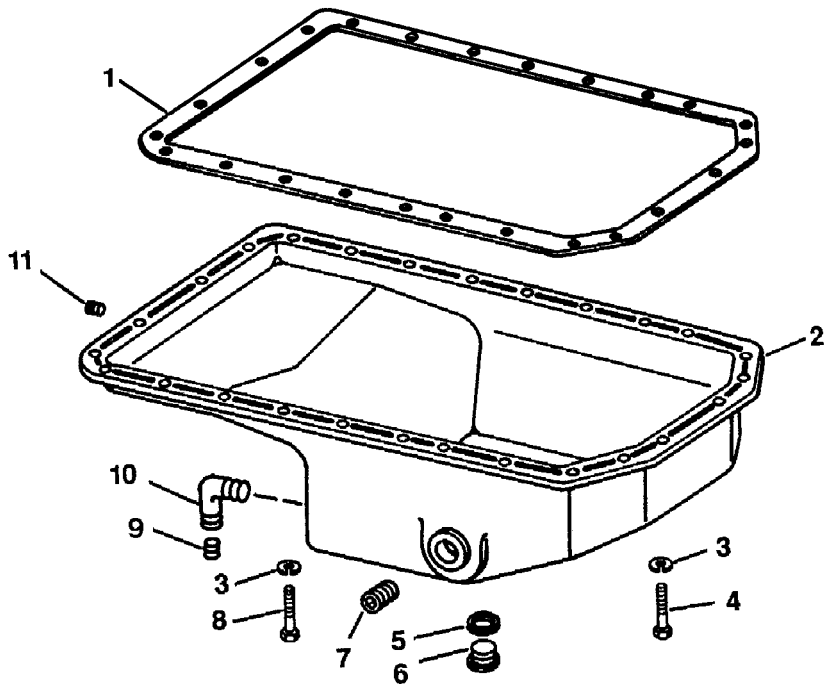


| Item | Part Number | Description      | Quantity         |
|------|-------------|------------------|------------------|
|      |             |                  | Variation Number |
|      |             |                  | <b>3</b>         |
| 1    | 360510      | Gasket           | 1                |
| 2    | 360511      | Cover            | 2                |
| 3    | 360078      | Plug, drain      | 1                |
| 4    | 360180      | O-ring           | 1                |
| 5    | #           | Screw, M8 x 40   | 10               |
| 5    | #           | Screw, M8 x 35   | 1                |
| 5    | 360512      | Screw            | 1                |
| 6    | #           | Screw, M8 x 35   | 1                |
| 6    | #           | Screw, M8 x 60   | 1                |
| 7    | 360107      | O-ring           | 1                |
| 8    | 360105      | Cover            | 1                |
| 9    | #           | Screw, M6 x 16   | 3                |
| 10   | 360513      | Screw            | 2                |
| 11   | 360181      | Seal Kit         | 1                |
| 12   | 224058      | Valve            | 1                |
| 13   | 224095      | Spring           | 1                |
| 14   | 223410      | Washer           | 1                |
| 15   | 223653      | Plug, fitting    | 1                |
| 16   | #           | Nut, flange M10  | 4                |
| 17   | #           | Screw, M8 x 55   | 2                |
| 18   | 360140      | Stud             | 4                |
| 19   | 360514      | Stud (not shown) | 2                |
| 20   | #           | Nut, flange M10  | 2                |

# Common hardware, procure locally.

# Group 21a: Oil Pan

Code 1901



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TP25403

Use engine model and serial number to verify the oil pan for your generator set. Find your model and serial number on the engine nameplate and choose the oil pan code from the chart below.

### Serial Number-Contingent Oil Pans

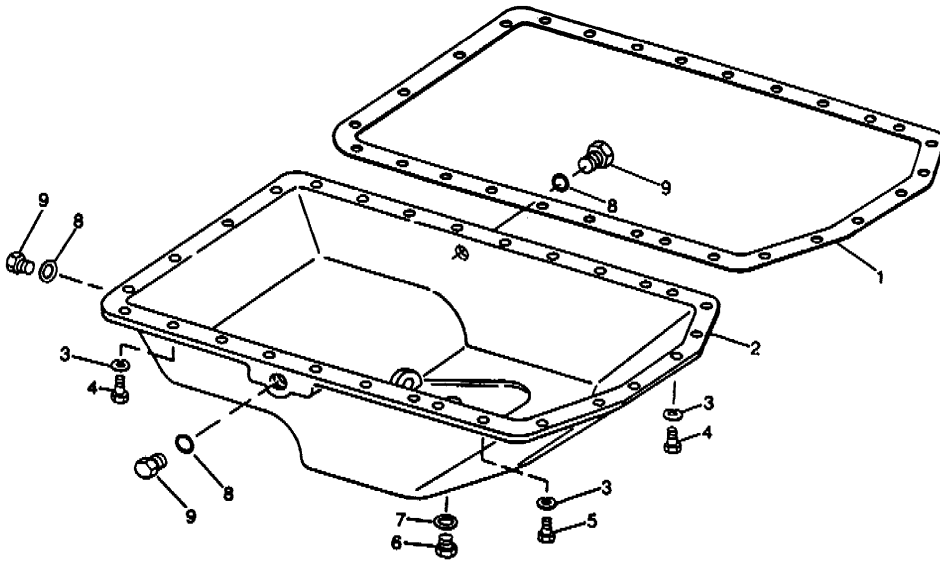
| Model    | Serial Number    | Code |
|----------|------------------|------|
| 4039D    | all              | 1901 |
| 4039T    | all              | 1908 |
| CD4039DF | before 181857    | 1901 |
| CD4039DF | 181857 and after | 1910 |
| CD4039TF | before 181857    | 1908 |
| CD4039TF | 181857 and after | 1910 |
| 4045DF   | all              | 1902 |
| 4045TF   | all              | 1904 |

| Item | Part Number | Description                            | Quantity         |
|------|-------------|--|------------------|
|      |             |  | Variation Number |
| 1    | 223645      | Gasket, oil pan                        | 1                |
| 2    | 223420      | Pan, oil (also order items 5-7 and 11) | 1                |
| 3    | #           | Washer, lock                           | 28               |
| 4    | #           | Screw, 3/8-16 x 7/8"                   | 6                |
| 5    | 223603      | Washer (seal)                          | 1                |
| 6    | 223616      | Plug, drain                            | 1                |
| 7    | #           | Plug, pipe 3/4 NPT recess. hex         | 1                |
| 8    | #           | Screw, 3/8-16 x 3/4"                   | 22               |
| 9    | not used    |  |                  |
| 10   | not used    |  |                  |
| 11   | #           | Plug, pipe 1/2 NPT                     | 1                |

# Common hardware, procure locally.

# Group 21a: Oil Pan, continued

Code 1908



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TP26802  
(was TP16412)

| Item | Part Number | Description                | Quantity         |
|------|-------------|----------------------------|------------------|
|      |             |                            | Variation Number |
| 1    | 223555      | Gasket, oil pan            | 1                |
| 2    | 223535      | Pan, oil                   | 1                |
| 3    | #           | Washer, 3/8" lock          | 28               |
| 4    | #           | Screw, 3/8-16 x 1-1/4" cap | 20               |
| 5    | #           | Screw, 3/8-16 x 2" cap     | 8                |
| 6    | 223451      | Plug, drain                | 2                |
| 7    | 223603      | Washer (seal)              | 2                |
| 8    | 223466      | O-ring                     | 2                |
| 9    | 223458      | Plug, drain                | 2                |

# Common hardware, procure locally.

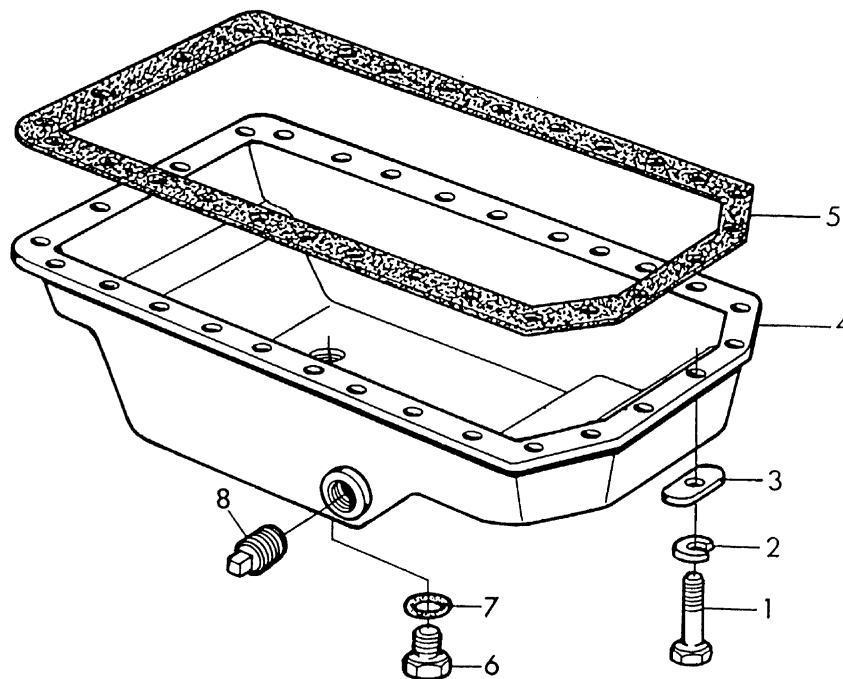
Use engine model and serial number to verify the oil pan for your generator set. Find your model and serial number on the engine nameplate and choose the oil pan code from the chart below.

### Serial Number-Contingent Oil Pans

| Model    | Serial Number    | Code |
|----------|------------------|------|
| 4039D    | all              | 1901 |
| 4039T    | all              | 1908 |
| CD4039DF | before 181857    | 1901 |
| CD4039DF | 181857 and after | 1910 |
| CD4039TF | before 181857    | 1908 |
| CD4039TF | 181857 and after | 1910 |
| 4045DF   | all              | 1902 |
| 4045TF   | all              | 1904 |

# Group 21a: Oil Pan, continued

Code 1910



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CD40501

Use engine model and serial number to verify the oil pan for your generator set. Find your model and serial number on the engine nameplate and choose the oil pan code from the chart below.

### Serial Number-Contingent Oil Pans

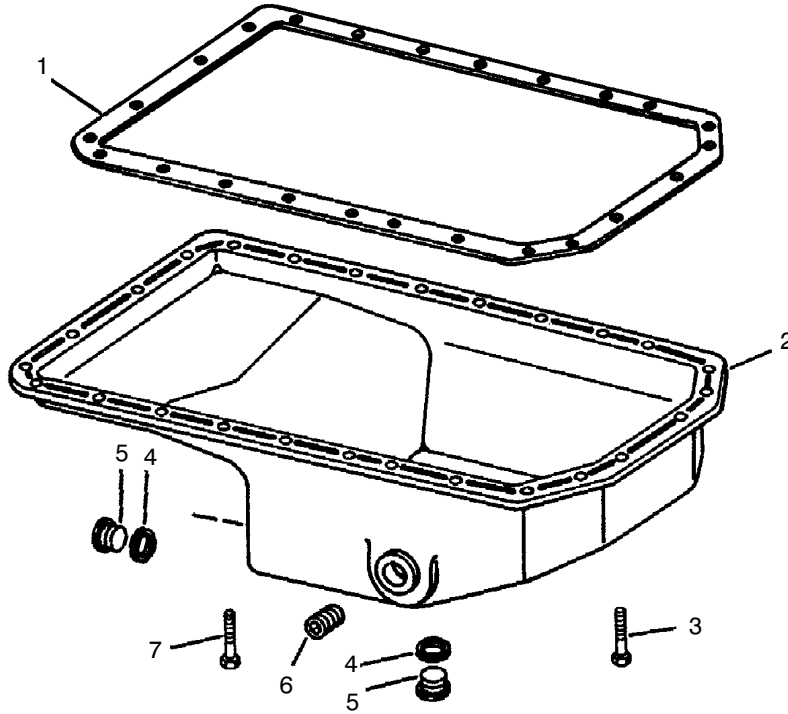
| Model    | Serial Number    | Code |
|----------|------------------|------|
| 4039D    | all              | 1901 |
| 4039T    | all              | 1908 |
| CD4039DF | before 181857    | 1901 |
| CD4039DF | 181857 and after | 1910 |
| CD4039TF | before 181857    | 1908 |
| CD4039TF | 181857 and after | 1910 |
| 4045DF   | all              | 1902 |
| 4045TF   | all              | 1904 |

| Item | Part Number | Description            | Quantity         |
|------|-------------|------------------------|------------------|
|      |             |                        | Variation Number |
| 1    | #           | Screw, 3/8 x 3/4"      | 28               |
| 2    | #           | Washer, 3/8" lock      | 28               |
| 3    | #           | Strap                  | 28               |
| 4    | 336587      | Pan, oil               | 1                |
| 5    | 336588      | Gasket                 | 1                |
| 6    | 223458      | Plug, drain            | 2                |
| 7    | 223466      | O-ring                 | 2                |
| 8    | #           | Pipe Plug, 1/2"-14 NPT | 1                |

# Common hardware, procure locally.

# Group 21a: Oil Pan, continued

Code 1902



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TP26802  
(was TP16412)

| Item | Part Number | Description     | Quantity         |
|------|-------------|-----------------|------------------|
|      |             |                 | Variation Number |
| 1    | 360525      | Gasket, oil pan | 1                |
| 2    | 360526      | Oil pan         | 1                |
| 3    | #           | Screw, M8 x 20  | 6                |
| 4    | 360176      | O-ring          | 2                |
| 5    | 360079      | Plug            | 2                |
| 6    | #           | Pipe Plug, 3/4" | 1                |
| 7    | #           | Screw, M8 x 16  | 22               |

# Common hardware, procure locally.

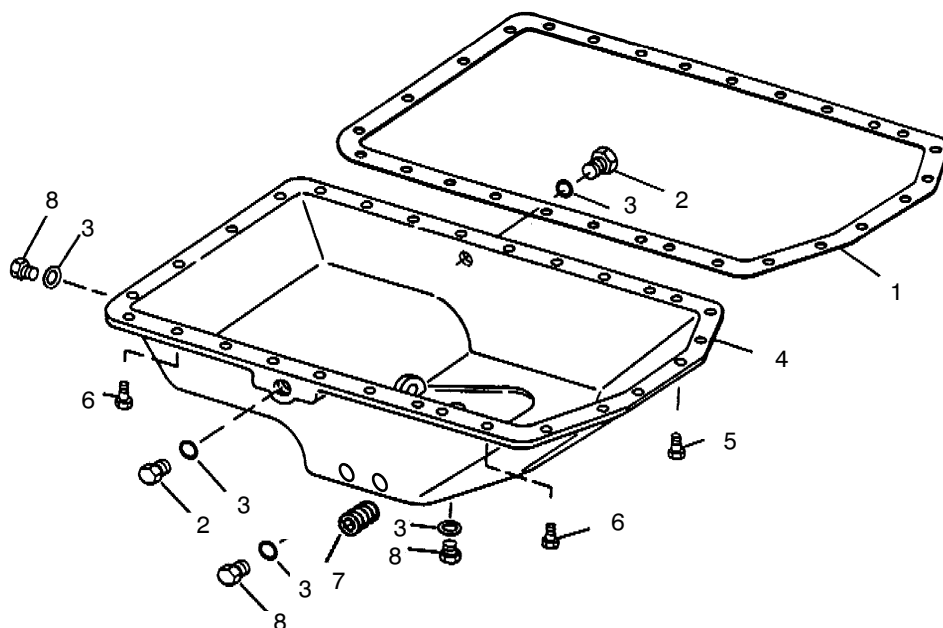
Use engine model and serial number to verify the oil pan for your generator set. Find your model and serial number on the engine nameplate and choose the oil pan code from the chart below.

**Serial Number-Contingent Oil Pans**

| Model    | Serial Number    | Code |
|----------|------------------|------|
| 4039D    | all              | 1901 |
| 4039T    | all              | 1908 |
| CD4039DF | before 181857    | 1901 |
| CD4039DF | 181857 and after | 1910 |
| CD4039TF | before 181857    | 1908 |
| CD4039TF | 181857 and after | 1910 |
| 4045DF   | all              | 1902 |
| 4045TF   | all              | 1904 |

# Group 21a: Oil Pan, continued

Code 1904



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TP26802  
(was TP16412)

Use engine model and serial number to verify the oil pan for your generator set. Find your model and serial number on the engine nameplate and choose the oil pan code from the chart below.

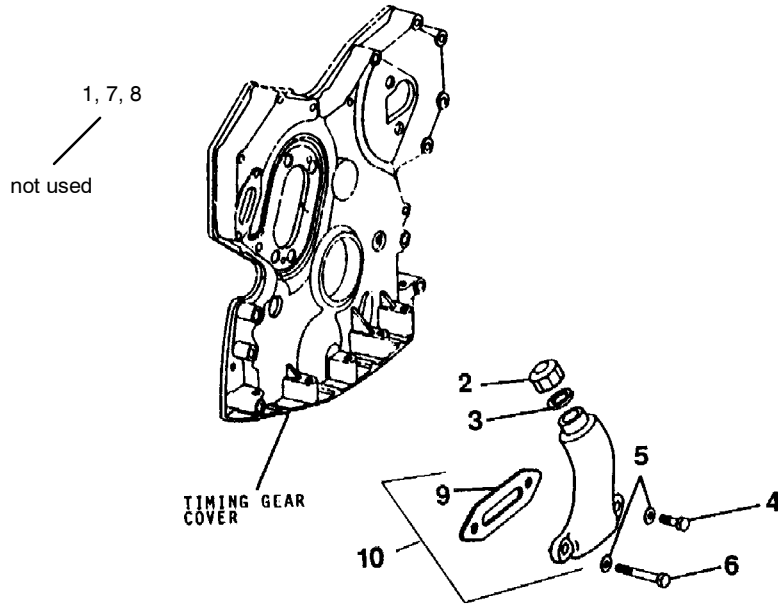
### Serial Number-Contingent Oil Pans

| Model    | Serial Number    | Code |
|----------|------------------|------|
| 4039D    | all              | 1901 |
| 4039T    | all              | 1908 |
| CD4039DF | before 181857    | 1901 |
| CD4039DF | 181857 and after | 1910 |
| CD4039TF | before 181857    | 1908 |
| CD4039TF | 181857 and after | 1910 |
| 4045DF   | all              | 1902 |
| 4045TF   | all              | 1904 |

| Item | Part Number | Description     | Quantity           |
|------|-------------|-----------------|--------------------|
|      |             |                 | Variation Number 4 |
| 1    | 360527      | Gasket, oil pan | 1                  |
| 2    | 360528      | Fitting         | 2                  |
| 3    | 360176      | O-ring          | 5                  |
| 4    | 360529      | Oil pan         | 1                  |
| 5    | #           | Screw, M8 x 30  | 6                  |
| 6    | #           | Screw, M8 x 25  | 18                 |
| 7    | #           | Pipe plug, 3/4" | 1                  |
| 8    | 360079      | Plug            | 3                  |
| 9    | #           | Screw, M8 x 45  | 4                  |

# Common hardware, procure locally.

# Group 21b: Oil Fill Tube



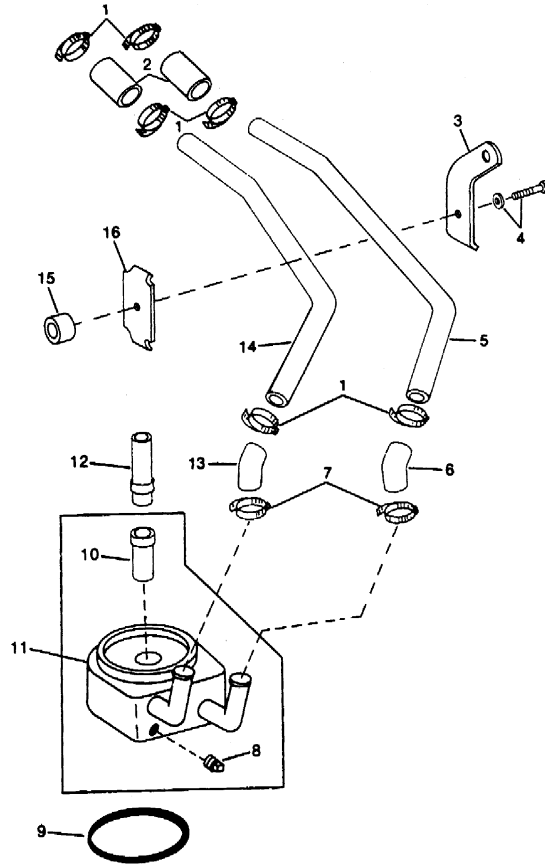
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TP26810  
 (was T30588)

| Item | Part Number | Description                   | Quantity         |   |
|------|-------------|-------------------------------|------------------|---|
|      |             |                               | Variation Number |   |
|      |             |                               | 1                | 2 |
| 1    | not used    |                               |                  |   |
| 2    | 223549      | Plug                          | 1                |   |
| 3    | 223636      | Gasket                        | 1                |   |
| 4    | #           | Screw, cap 3/8-16 x 1-5/8"    | 1                |   |
| 4    | 360067      | Screw, cap                    |                  | 1 |
| 5    | #           | Washer, 13/32 x 23/32 x 0.12" | 2                |   |
| 6    | #           | Screw, 3/8-16 x 3"            | 1                |   |
| 6    | 360067      | Screw, cap                    |                  | 1 |
| 7    | not used    |                               |                  |   |
| 8    | not used    |                               |                  |   |
| 9    | See item 10 | Gasket                        | 1                |   |
| 9    | 360090      | Gasket                        |                  | 2 |
| 10   | 223584      | Neck, filler                  | 1                |   |
| 10   | 360089      | Cover                         |                  | 2 |

# Common hardware, procure locally.

# Group 21c: Oil Cooler



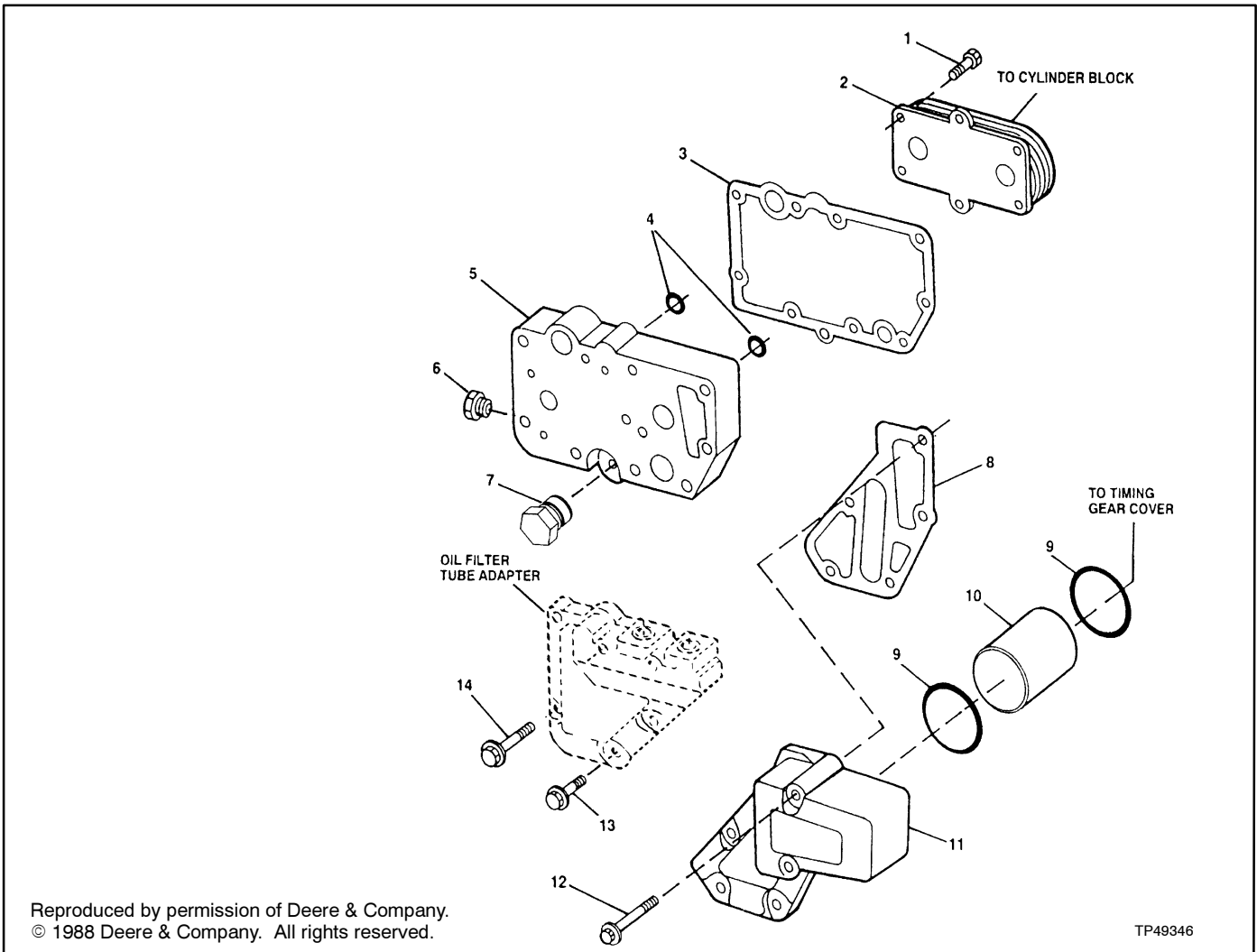
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TP26821

| Item | Part Number | Description                  | Quantity           |                    |
|------|-------------|------------------------------|--------------------|--------------------|
|      |             |                              | Variation Number 1 | Variation Number 2 |
| 1    | #           | Clamp                        | 6                  | 6                  |
| 2    | #           | Hose, .625 ID x 1.0 OD x 20" | 2                  |                    |
| 2    | 336464      | Hose                         |                    | 2                  |
| 3    | 224022      | Flange                       | 1                  |                    |
| 3    | 336466      | Clamp                        |                    | 1                  |
| 4    | #           | Screw                        | 1                  | 1                  |
| 5    | 223510      | Tube, lower                  | 1                  |                    |
| 5    | 336462      | Tube, lower                  |                    | 1                  |
| 6    | 224061      | Hose, lower                  | 1                  |                    |
| 6    | 336463      | Hose, lower                  |                    | 1                  |
| 7    | #           | Clamp                        | 2                  | 2                  |
| 8    | 223493      | Plug, drain                  | 1                  |                    |
| 9    | 223506      | Washer                       | 1                  | 1                  |
| 10   | 360777      | Valve, relief                | 1                  |                    |
| 11   | 224085      | Cooler, oil                  | 1                  |                    |
| 11   | 336460      | Cooler, oil                  |                    | 1                  |
| 12   | 223661      | Nipple, threaded             | 1                  |                    |
| 12   | 336465      | Nipple, threaded             |                    | 1                  |
| 13   | 224291      | Hose, upper                  | 1                  |                    |
| 13   | 336463      | Hose, upper                  |                    | 1                  |
| 14   | 223509      | Tube, upper                  | 1                  |                    |
| 14   | 336461      | Tube, upper                  |                    | 1                  |
| 15   | 224334      | Washer (spacer)              | 1                  |                    |
| 15   | 336467      | Washer (spacer)              |                    | 1                  |
| 16   | 224023      | Clamp                        | 1                  |                    |
| 16   | 336466      | Clamp                        |                    | 1                  |

# Common hardware, procure locally.

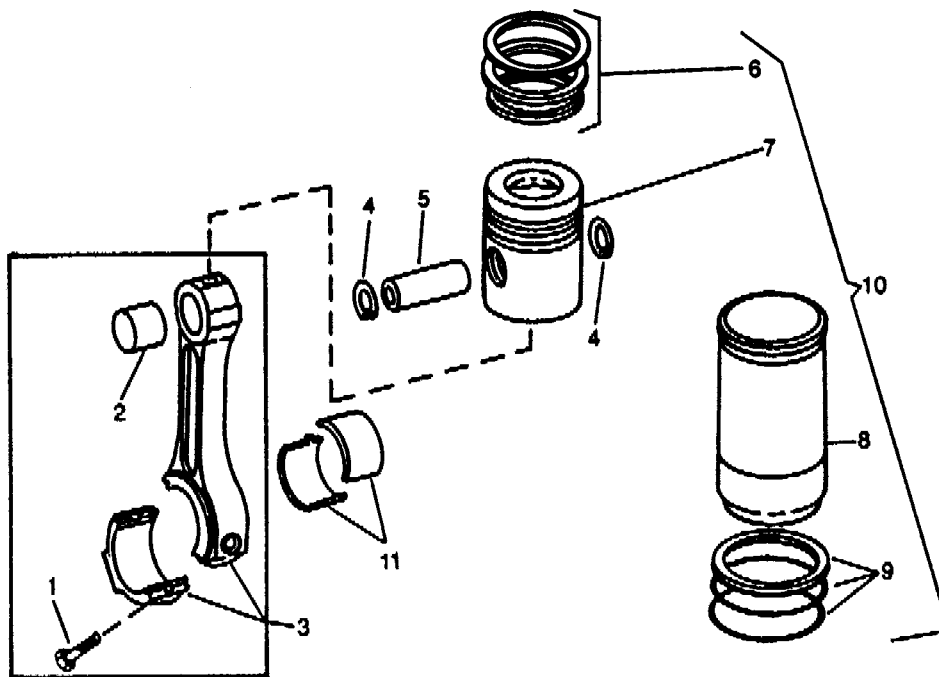
# Group 21c: Oil Cooler, continued



| Item | Part Number | Description     | Quantity         |
|------|-------------|-----------------|------------------|
|      |             |                 | Variation Number |
| 1    | #           | Screw           | 6                |
| 2    | 360560      | Cooler, oil     | 1                |
| 3    | 360130      | Gasket          | 1                |
| 4    | 360170      | O-ring          | 2                |
| 5    | 360127      | Housing         | 1                |
| 6    | 360015      | Plug            | 1                |
| 7    | 360014      | Plug            | 1                |
| 8    | 360131      | Gasket          | 1                |
| 9    | 360164      | O-ring          | 2                |
| 10   | 360086      | Tube            | 1                |
| 11   | 360128      | Adapter         | 1                |
| 12   | #           | Screw, M8 x 100 | 2                |
| 13   | #           | Screw, M8 x 20  | 2                |
| 14   | #           | Screw, M8 x 65  | 2                |

# Common hardware, procure locally.

## Group 22: Piston and Connecting Rod



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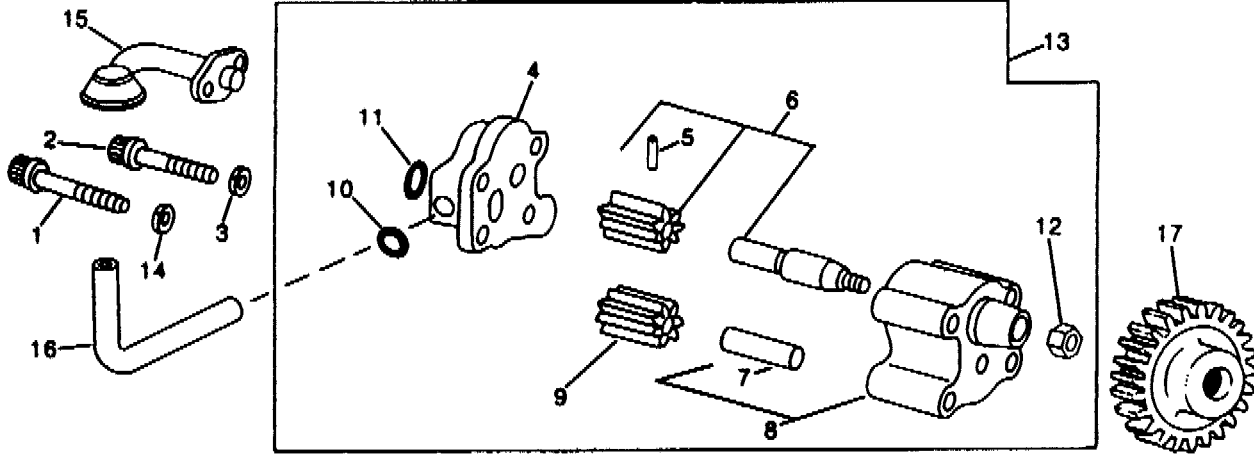
TP2835

| Item | Part Number | Description                  | Quantity         |   |   |   |
|------|-------------|------------------------------|------------------|---|---|---|
|      |             |                              | Variation Number |   |   |   |
|      |             |                              | 1                | 2 | 3 | 4 |
| 1    | 223528      | Screw, connecting rod        | 8                | 8 |   |   |
| 1    | 360081      | Screw, connecting rod        |                  |   | 8 | 8 |
| 2    | 223499      | Bushing                      | 4                | 4 |   |   |
| 2    | 360145      | Bushing                      |                  |   | 4 | 4 |
| 3    | 223567      | Rod, connecting              | 4                | 4 |   |   |
| 3    | 360047      | Rod, connecting              |                  |   | 4 | 4 |
| 4    | 223452      | Ring, snap                   | 8                |   | 8 | 8 |
| 4    | 223479      | Ring, snap                   |                  | 8 |   |   |
| 5    | 233743      | Pin, piston                  | 4                |   |   |   |
| 5    | 223488      | Pin, piston                  |                  | 4 |   |   |
| 5    | 360114      | Pin, piston                  |                  |   | 4 | 4 |
| 6    | 223565      | Ring kit, piston (set 3)     | 4                | 4 |   |   |
| 6    | 360066      | Ring kit, piston (set 3)     |                  |   | 4 | 4 |
| 7    | 223571      | Piston                       | 4                |   |   |   |
| 7    | 223570      | Piston                       |                  | 4 |   |   |
| 7    | X           | Piston                       |                  |   | 4 | 4 |
| 8    | X           | Liner, cylinder              | 4                | 4 | 4 | 4 |
| 9    | X           | O-ring kit                   | 4                | 4 |   |   |
| 9    | 223419      | O-ring kit                   |                  |   | 4 | 4 |
| 10   | 223589      | Piston assembly kit          | 4                |   |   |   |
| 10   | 223589      | Piston assembly kit          |                  | 4 |   |   |
| 10   | 360515      | Piston assembly kit          |                  |   | 4 |   |
| 10   | 360059      | Piston assembly kit          |                  |   |   | 4 |
| 11   | 223441      | Bearing (set of 2) std.      | 4                |   |   |   |
| 11   | 223423      | Bearing (set of 2) std.      |                  | 4 |   |   |
| 11   | 360053      | Bearing (set of 2) std.      |                  |   | 4 | 4 |
| 11   | 223437      | Bearing (set of 2) .002" U/S | 4                |   |   |   |
| 11   | 223425      | Bearing (set of 2) .002" U/S |                  | 4 |   |   |
| 11   | 223438      | Bearing (set of 2) .010" U/S | 4                |   |   |   |
| 11   | 223426      | Bearing (set of 2) .010" U/S |                  | 4 |   |   |
| 11   | 360054      | Bearing (set of 2) .010" U/S |                  |   | 4 | 4 |
| 11   | 223439      | Bearing (set of 2) .020" U/S | 4                |   |   |   |
| 11   | 223427      | Bearing (set of 2) .020" U/S |                  | 4 |   |   |
| 11   | 223440      | Bearing (set of 2) .030" U/S | 4                |   |   |   |
| 11   | 223428      | Bearing (set of 2) .030" U/S |                  | 4 |   |   |
| 12   | 223415      | Lubricant                    | 1                | 1 |   |   |

X Item not sold separately.

# Group 25: Oil Pump

See next page for oil pump components on engine models CD4039TF with engine serial numbers 181857 and above.



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TP26839

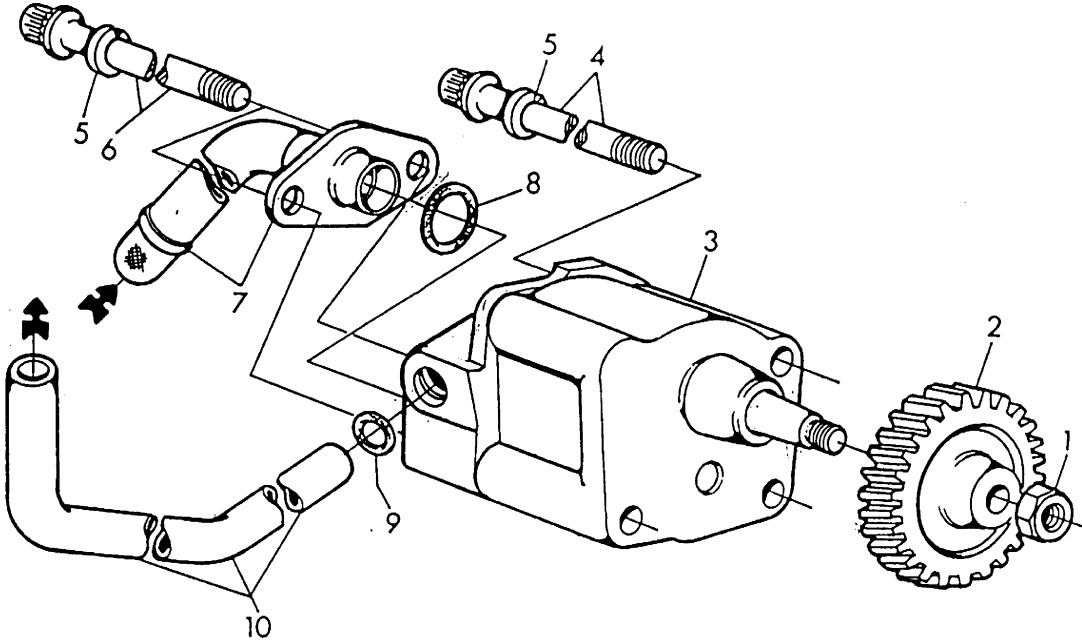
| Item | Part Number | Description       | Quantity |   |
|------|-------------|-------------------|----------|---|
|      |             |                   | 1        | 2 |
| 1    | 224279      | Screw             | 2        | 2 |
| 2    | 224274      | Screw             | 2        | 2 |
| 3    | #           | Washer, 3/8" lock | 2        | 2 |
| 4    | X           | Cover             | 1        | 1 |
| 5    | 224266      | Pin, groove       | 1        | 1 |
| 6    | X           | Pinion            | 1        | 1 |
| 7    | X           | Pin, dowel        | 1        | 1 |
| 8    | X           | Housing           | 1        | 1 |
| 9    | X           | Gear (7 teeth)    | 1        | 1 |
| 10   | 223511      | O-ring            | 1        | 1 |
| 11   | 224035      | O-ring            | 1        | 1 |
| 12   | #           | Nut, 1/2"         | 1        | 1 |
| 13   | 223596      | Kit, oil pump     | 1        | 1 |
| 14   | 224159      | Washer            | 2        | 2 |
| 15   | 224294      | Intake, oil pump  | 1        |   |
| 15   | 336457      | Intake, oil pump  |          | 1 |
| 16   | 223608      | Tube, oil         | 1        | 1 |
| 17   | 223631      | Gear (33 teeth)   | 1        | 1 |

# Common hardware, procure locally.

X Item not sold separately.

# Group 25: Oil Pump

Engine model 4045 and engine model CD4039TF with engine serial numbers 181857 and above.



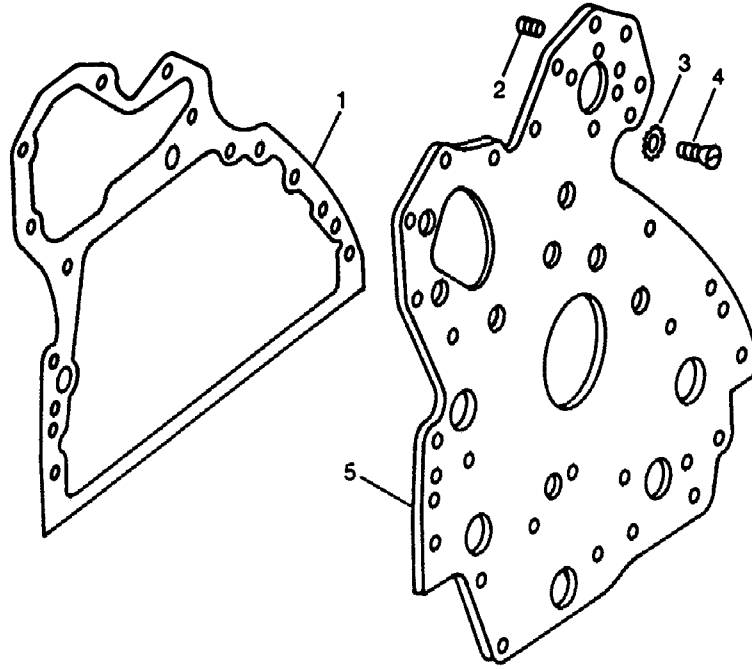
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CD39105

| Item | Part Number | Description       | Quantity |   |
|------|-------------|-------------------|----------|---|
|      |             |                   | 2        | 3 |
| 1    | #           | Nut, 1/2-13"      | 1        |   |
| 1    | #           | Nut, M12          |          | 1 |
| 2    | 223631      | Gear              | 1        |   |
| 2    | 360524      | Gear              |          | 1 |
| 3    | 336584      | Pump, oil         | 1        |   |
| 3    | 360028      | Pump, oil         |          | 1 |
| 4    | 224274      | Screw, cap, 2.75" | 3        |   |
| 4    | #           | Screw, M8 x 65    |          | 2 |
| 5    | #           | Lock washer, 3/8" | 3        |   |
| 6    | 336585      | Screw, cap, 3.89" | 2        |   |
| 6    | #           | Screw, M8 x 100   |          | 2 |
| 7    | 336457      | Oil pump intake   | 1        |   |
| 7    | 360523      | Oil pump intake   |          | 1 |
| 8    | 224035      | O-ring            | 1        | 1 |
| 9    | 223511      | O-ring            | 1        |   |
| 9    | 336458      | O-ring            |          | 1 |
| 10   | 336583      | Oil tube          | 1        |   |
| 10   | 360104      | Oil tube          |          | 1 |

# Common hardware, procure locally.

# Group 26: Front Plate



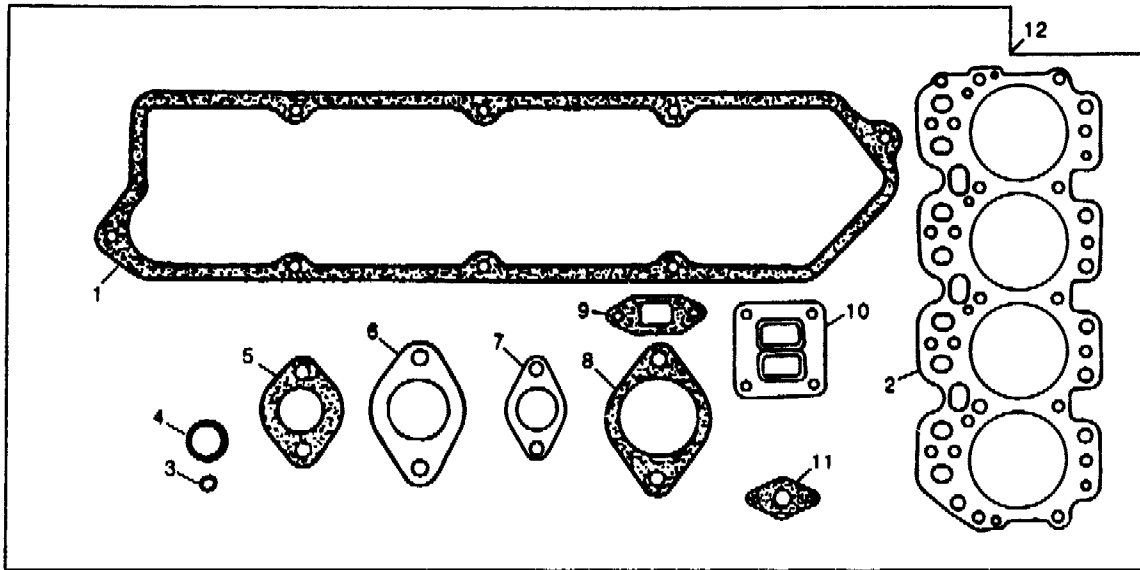
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T16883F  
 (was TP1130)

| Item | Part Number | Description                  | Quantity         |   |
|------|-------------|------------------------------|------------------|---|
|      |             |                              | Variation Number |   |
|      |             |                              | 1                | 2 |
| 1    | 223548      | Gasket                       | 1                |   |
| 2    | 223442      | Screw, set                   | 8                |   |
| 2    | 223445      | Screw, set                   | 1                |   |
| 3    | #           | Washer, 3/8" ext. tooth lock | 5                |   |
| 4    | 224333      | Screw                        | 5                |   |
| 4    | 360516      | Screw                        |                  | 6 |
| 5    | 223566      | Plate                        | 1                |   |
| 5    | 360110      | Plate                        |                  | 1 |

# Common hardware, procure locally.

# Group 39a: Cylinder Head Gasket Set



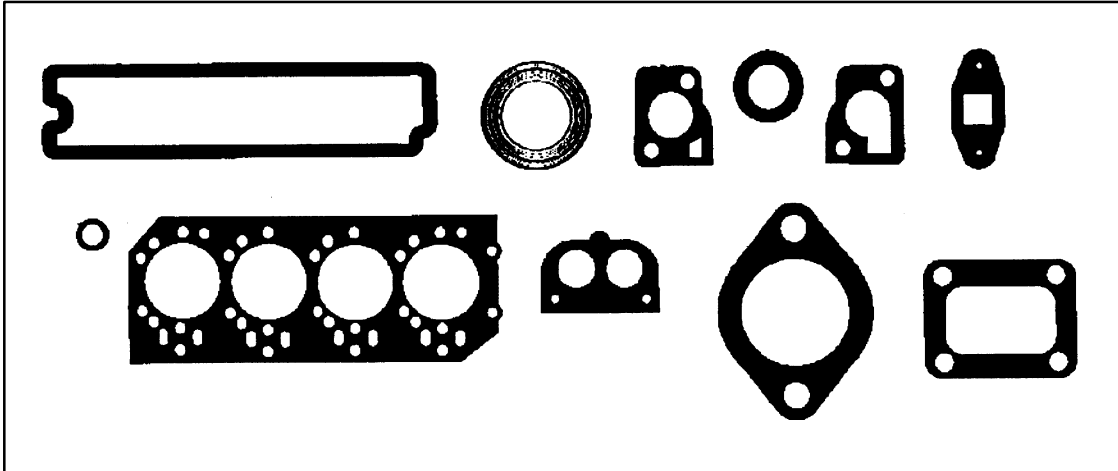
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TP26212

| Item | Part Number | Description                 | Quantity           |                    |
|------|-------------|-----------------------------|--------------------|--------------------|
|      |             |                             | Variation Number 1 | Variation Number 2 |
| 1    | 223508      | Gasket, rocker arm cover    | 1                  | 1                  |
| 2    | 223530      | Gasket, cylinder head       | 1                  | 1                  |
| 3    | 223543      | O-ring, valve stem          | 8                  | 8                  |
| 4    | 223491      | O-ring, vent tube           | 1                  | 1                  |
| 5    | 224020      | Gasket, thermostat housing  | 1                  | 1                  |
| 6    | 223547      | Gasket, exhaust manifold    | 4                  | 4                  |
| 7    | not used    | Gasket, thermostat cover    | 1                  | 1                  |
| 8    | 223532      | Gasket, air inlet           | 1                  | 1                  |
| 9    | 223556      | Gasket, turbocharger outlet |                    | 1                  |
| 10   | 223483      | Gasket, turbocharger        |                    | 1                  |
| 11   | X           | Gasket, turbocharger        |                    | 1                  |
| 12   | 223600      | Gasket kit, cylinder head   | 1                  | 1                  |

X Item not sold separately.

# Group 39a: Cylinder Head Gasket Set, continued



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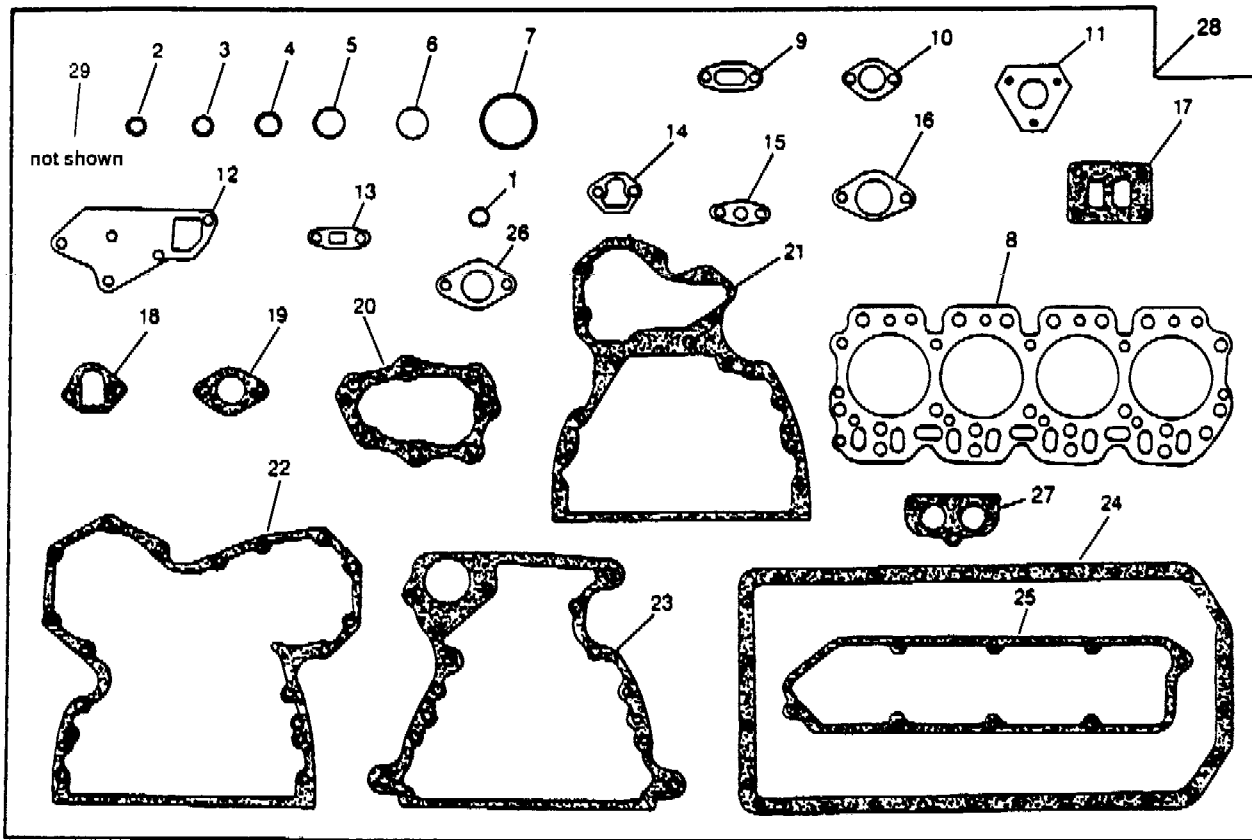
TP49292

| Item | Part Number | Description               | Quantity         |
|------|-------------|---------------------------|------------------|
|      |             |                           | Variation Number |
| 1    | 360586      | Gasket set, cylinder head | 3                |
|      |             |                           | 1                |

# Notes

# Group 39b: Overhaul Gasket Kit

30-34 not shown



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TP26471

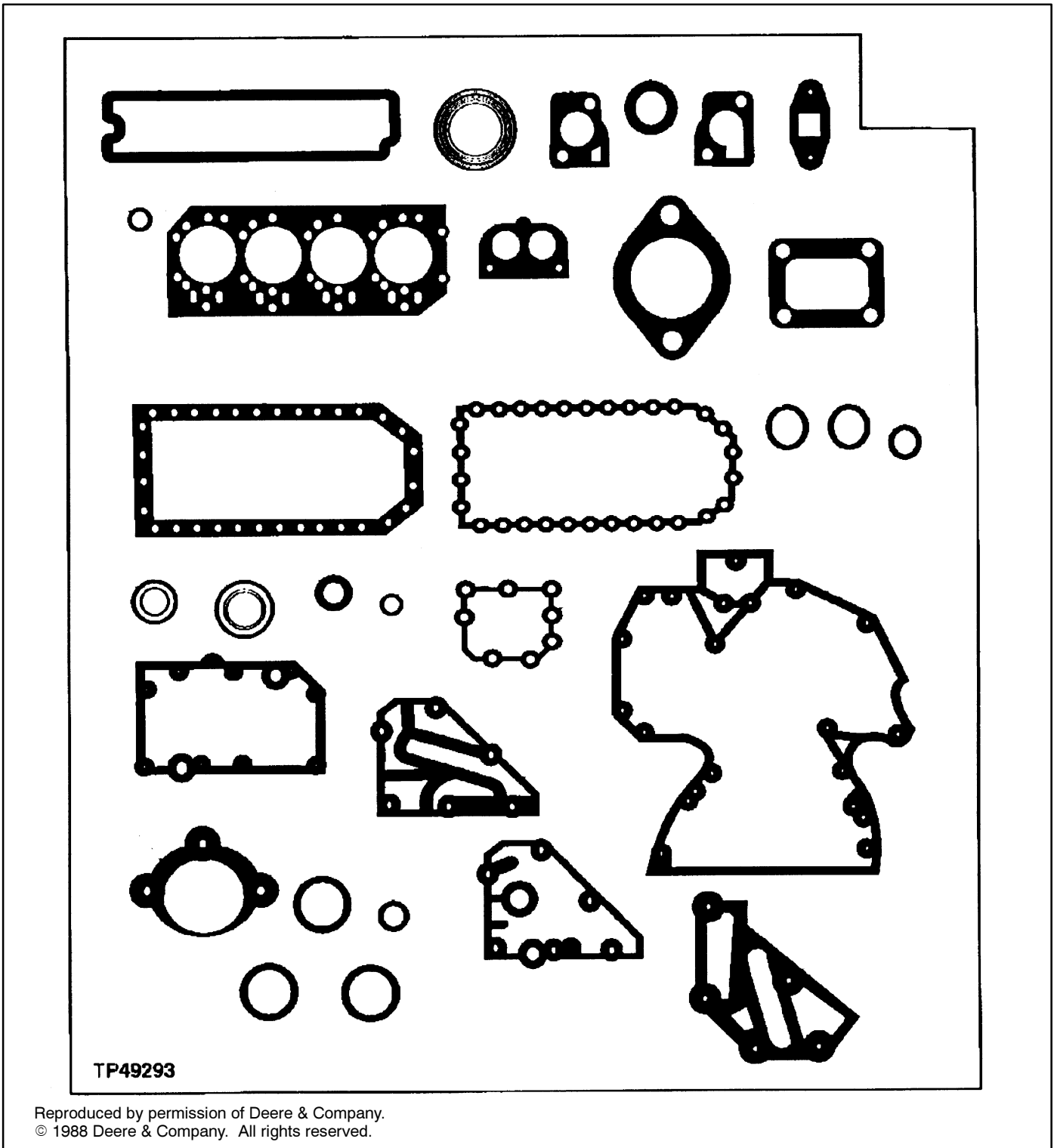
## Group 39b: Overhaul Gasket Kit

| Item | Part Number | Description                       | Quantity         |   |
|------|-------------|-----------------------------------|------------------|---|
|      |             |                                   | Variation Number |   |
|      |             |                                   | 1                | 2 |
| 1    | 223543      | O-ring, valve stem                | 8                | 8 |
| 2    | not used    | Washer, tach. drive shaft         | 1                | 1 |
| 3    | 223603      | Washer, oil drain plug            | 1                | 1 |
| 4    | 223636      | Gasket, oil filler cap            | 1                | 1 |
| 5    | 223491      | O-ring, vent tube                 | 1                | 1 |
| 6    | 223511      | O-ring, oil pump tube outlet      | 1                | 1 |
| 7    | 223506      | Washer, oil cooler                | 1                | 1 |
| 8    | 223530      | Gasket, cylinder head             | 1                | 1 |
| 9    | 223556      | Gasket, turbo oil outlet          | 1                | 1 |
| 10   | 223627      | Gasket, thermostat housing        | 1                | 1 |
| 11   | X           | Gasket, fuel injection pump       | 1                | 1 |
| 12   | 223628      | Gasket, water pump cover          | 1                | 1 |
| 13   | 223559      | Gasket, oil filler inlet          | 1                | 1 |
| 14   | 223557      | Gasket, fuel pump                 | 1                | 1 |
| 15   | X           | Gasket, turbo oil inlet           | 1                | 1 |
| 16   | 223532      | Gasket, air inlet                 | 1                | 1 |
| 17   | 223483      | Gasket, turbocharger              | 1                | 1 |
| 18   | 223515      | Gasket, injection pump gear cover | 1                | 1 |
| 19   | 223547      | Gasket, exhaust manifold          | 4                | 4 |
| 20   | 224092      | Gasket, timing gear cover         | 1                | 1 |
| 21   | 223548      | Gasket, cylinder block plate      | 1                | 1 |
| 22   | 223620      | Gasket, timing gear cover         | 1                | 1 |
| 23   | 223558      | Gasket, flywheel housing          | 1                | 1 |
| 24   | 223555      | Gasket, oil pan                   | 1                | 1 |
| 25   | 223508      | Gasket, oil pan                   | 1                | 1 |
| 26   | 223626      | Gasket, single thermo. cover      | 1                | 1 |
| 27   | not used    | Gasket, thermostat cover          | 1                | 1 |
| 28   | 223601      | Gasket kit                        | 1                | 1 |
| 29   | 223419      | O-ring, cylinder liner            | 4                | 4 |
| 30   | 224277      | Washer, F.I. nozzle               | 4                | 4 |
| 31   | 224270      | Washer, F.I. nozzle               | 4                | 4 |
| 32   | 224261      | Seal, oil (crankshaft)            | 4                | 4 |
| 33   | 223583      | Seal, oil (crankshaft)            | 1                | 1 |
| 34   | 224020      | Gasket, thermostat housing        | 1                | 1 |

X Item not sold separately.

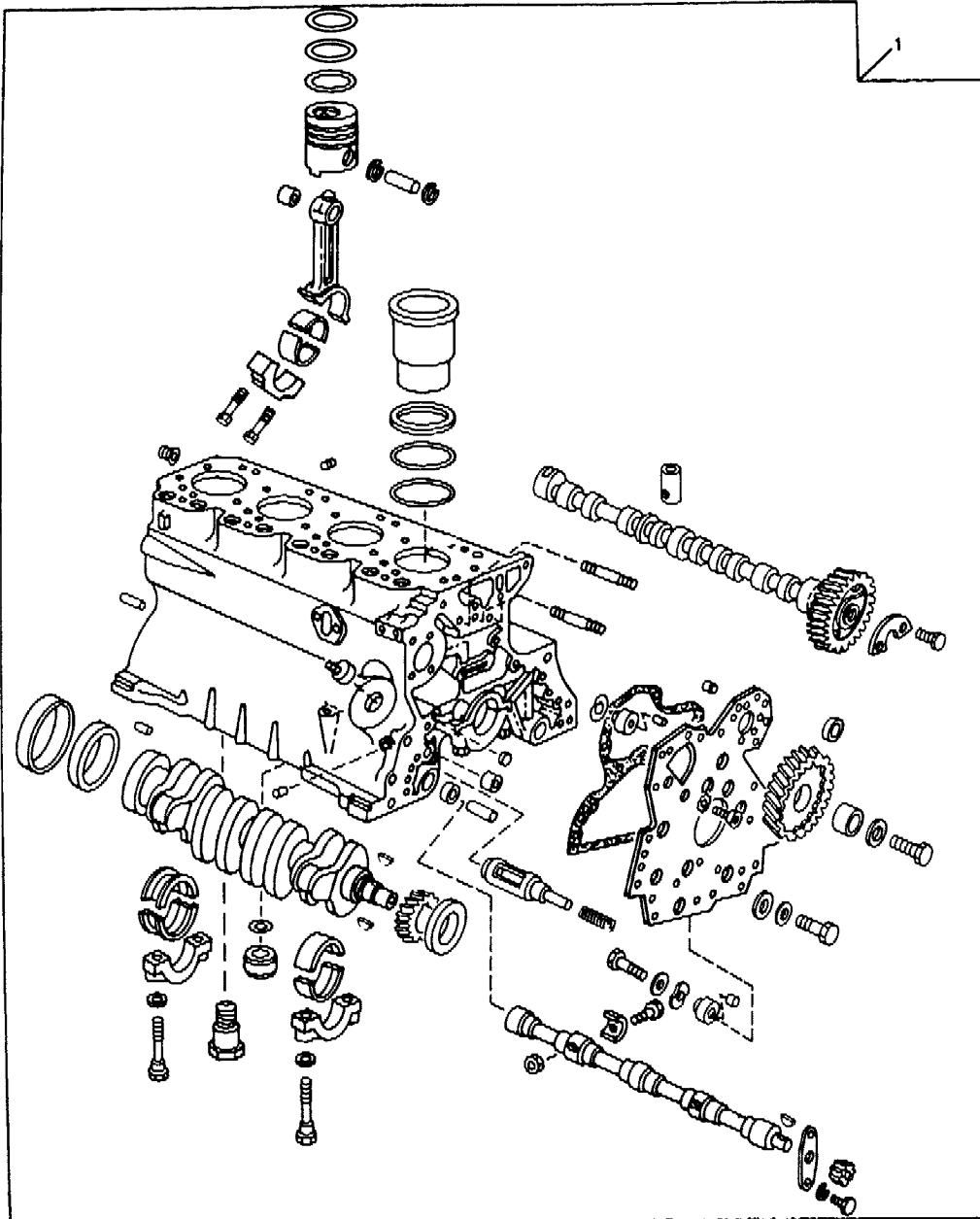
**NOTE:** For a complete set of gaskets, order items 28-33.

# Group 39b: Overhaul Gasket Kit, continued



| Item | Part Number | Description         | Quantity         |
|------|-------------|---------------------|------------------|
|      |             |                     | Variation Number |
| 1    | 360587      | Overhaul gasket set | 3                |
|      |             |                     | 1                |

# Group 42: Short Block



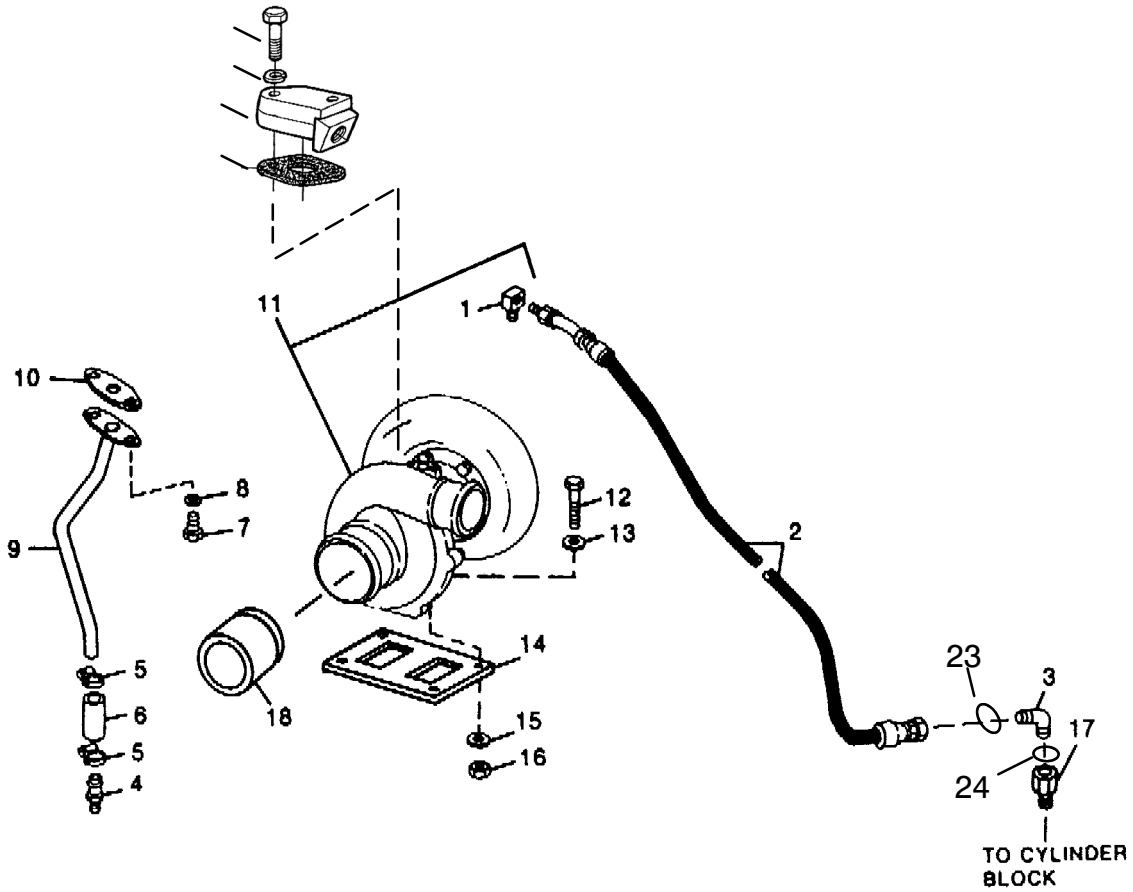
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TP23754

| Item | Part Number | Description           | Quantity           |                    |                    |
|------|-------------|-----------------------|--------------------|--------------------|--------------------|
|      |             |                       | Variation Number 1 | Variation Number 2 | Variation Number 3 |
| 1    | 223588      | Block assembly, short | 1                  |                    |                    |
| 1    | 360520      | Block assembly, short |                    | 1                  |                    |
| 1    | 360521      | Block assembly, short |                    |                    | 1                  |

**NOTE:** Variation 1: Also order AR67942 seal, RE24959 seal, and RE38857 gasket kit, see Group 39b. Short block does not include balancer shafts.

# Group 50a: Turbocharger and Oil Lines



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TP25666

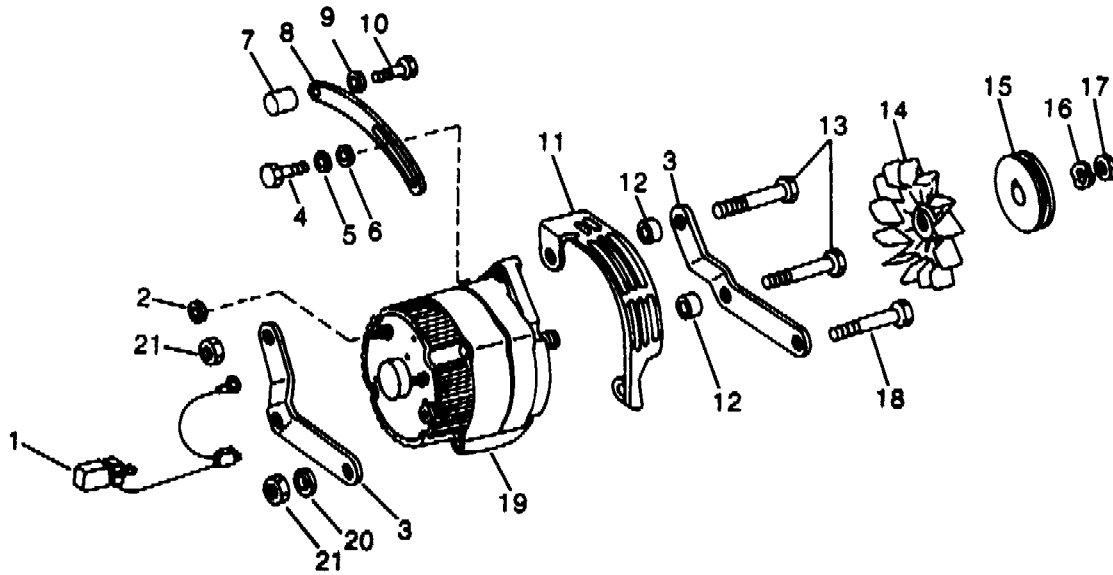
# Group 50a: Turbocharger and Oil Lines

| Item | Part Number | Description                  | Quantity           |                    |                    |
|------|-------------|------------------------------|--------------------|--------------------|--------------------|
|      |             |                              | Variation Number 2 | Variation Number 3 | Variation Number 4 |
| 1    | 223602      | Fitting, elbow               | 1                  |                    |                    |
| 1    | 336472      | Fitting, elbow               |                    | 1                  |                    |
| 1    | 360006      | Adapter                      |                    |                    | 1                  |
| 1    | 360165      | O-ring                       |                    |                    | 1                  |
| 2    | 224326      | Hose                         | 1                  |                    |                    |
| 2    | 336473      | Hose                         |                    | 1                  |                    |
| 2    | 360026      | Hose                         |                    |                    | 1                  |
| 3    | 223412      | Fitting, elbow               | 1                  |                    |                    |
| 3    | 223457      | Fitting, elbow               |                    | 1                  |                    |
| 3    | 360556      | Fitting, elbow               |                    |                    | 1                  |
| 4    | 223641      | Fitting, hose                | 1                  |                    |                    |
| 4    | 336474      | Fitting, hose                |                    | 1                  |                    |
| 4    | 360102      | Fitting, hose                |                    |                    | 1                  |
| 5    | #           | Clamp                        | 2                  |                    |                    |
| 5    | 360062      | Clamp                        |                    |                    | 2                  |
| 6    | 223531      | Hose                         | 1                  | 1                  |                    |
| 6    | 360097      | Hose                         |                    |                    | 1                  |
| 7    | #           | Screw, 3/8 x 7/8" cap        | 2                  | 2                  |                    |
| 7    | #           | Screw, M8 x 10               |                    |                    | 2                  |
| 8    | #           | Washer, 3/8" lock            | 2                  | 2                  |                    |
| 9    | 223568      | Line, oil                    | 1                  |                    |                    |
| 9    | 336476      | Line, oil                    |                    | 1                  |                    |
| 9    | 360558      | Line, oil                    |                    |                    | 1                  |
| 10   | 223757      | Gasket, turbocharger outlet  | 1                  |                    |                    |
| 10   | 223556      | Gasket, turbocharger outlet  |                    | 1                  |                    |
| 10   | 360136      | Gasket, turbocharger outlet  |                    |                    | 1                  |
| 11   | 223598      | Turbocharger kit             | 1                  |                    |                    |
| 11   | 336471      | Turbocharger kit             |                    | 1                  |                    |
| 11   | 360554      | Turbocharger                 |                    |                    | 1                  |
| 11   | X           | Housing, turbocharger center | 1                  | 1                  |                    |
| 11   | X           | Hardware, turbocharger       | 1                  | 1                  |                    |
| 12   | #           | Screw, 3/8-16 x 1-3/4" cap   | 4                  |                    |                    |
| 12   | #           | Screw, 3/8 x 1-5/8" cap      |                    | 4                  |                    |
| 12   | #           | Screw, M10 x 25              |                    |                    | 4                  |
| 13   | #           | Washer, 13/32 x 13/16 x .06" | 4                  |                    |                    |
| 14   | 223483      | Gasket                       | 1                  | 1                  |                    |
| 14   | 360137      | Gasket                       |                    |                    | 1                  |
| 15   | #           | Washer, 3/8" lock            | 4                  | 4                  |                    |
| 16   | #           | Nut, 3/8-16                  | 4                  | 4                  |                    |
| 17   | 223405      | Adapter, 3/8 NPT             | 1                  |                    |                    |
| 17   | 336477      | Tee                          |                    | 1                  |                    |
| 18   | 223538      | Adapter                      | 1                  |                    |                    |
| 19   | #           | Screw, 5/16 x 2"             |                    | 2                  |                    |
| 20   | #           | Washer, 5/16"                |                    | 2                  |                    |
| 21   | 336478      | Adapter                      |                    | 1                  |                    |
| 22   | 336479      | Gasket                       |                    | 1                  |                    |
| 23   | 360555      | O-ring                       |                    |                    | 1                  |
| 24   | 360557      | O-ring                       |                    |                    | 1                  |

# Common hardware, procure locally.

**NOTE:** Item 11 Turbocharger Kit includes item 1.

# Group 51a: Alternator



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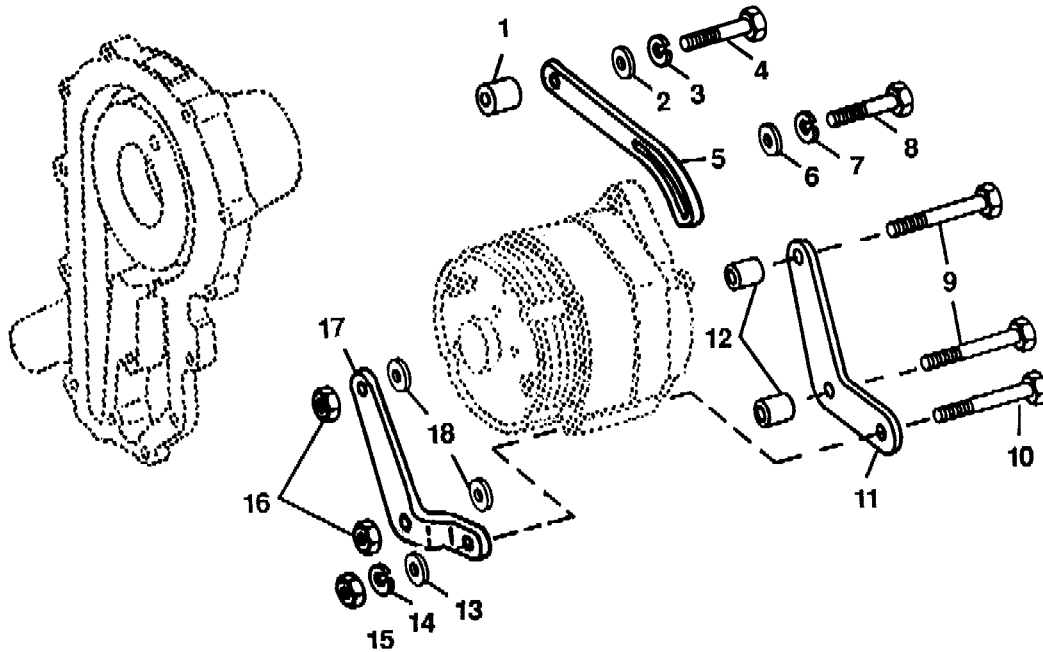
TP26822

# Group 51a: Alternator

| Item | Part Number | Description                    | Quantity         |   |   |
|------|-------------|--------------------------------|------------------|---|---|
|      |             |                                | Variation Number |   |   |
|      |             |                                | 1                | 2 | 3 |
| 1    | 224235      | Harness, wiring                | 1                |   |   |
| 1    | 360046      | Harness, wiring                |                  | 1 | 1 |
| 2    | #           | Nut, M6 lock                   | 1                |   |   |
| 3    | 224033      | Bracket                        | 2                |   |   |
| 4    | #           | Screw, M8 x 25                 | 1                |   |   |
| 5    | #           | Washer, 5/16" lock             | 1                |   |   |
| 6    | #           | Washer, 11/32 x 1 x 0.194"     | 1                |   |   |
| 7    | #           | Washer, 0.493 x 0.675 x 1/4"   | 1                |   |   |
| 8    | 223625      | Strap                          | 1                |   |   |
| 9    | #           | Washer, 3/8" lock              | 2                |   |   |
| 9    | #           | Washer, 13/32 x 23/32 x 0.120" | 3                |   |   |
| 10   | #           | Screw, 3/8-16 x 1-7/8"         | 1                |   |   |
| 11   | 223485      | Shield                         | 1                |   |   |
| 11   | 360594      | Shield                         |                  | 1 | 1 |
| 12   | #           | Spacer, 3/8 x 7/16"            | 2                |   |   |
| 13   | #           | Screw, 3/8-16 x 3"             | 2                |   |   |
| 14   | 224282      | Fan                            | 1                |   |   |
| 14   | 360588      | Fan                            |                  | 1 | 1 |
| 15   | 224283      | Sheave (pulley)                | 1                |   |   |
| 15   | 360168      | Sheave (pulley)                |                  | 1 | 1 |
| 16   | 224331      | Washer                         | 1                | 1 | 1 |
| 16   | 360169      | Bushing                        |                  | 1 | 1 |
| 17   | 224269      | Nut                            | 1                |   |   |
| 17   | #           | Nut, M16                       |                  | 1 | 1 |
| 18   | #           | Screw, M10 x 75 cap            | 1                |   |   |
| 19   | 224244      | Alternator                     | 1                |   |   |
| 19   | 360001      | Alternator, 12 V               |                  | 1 |   |
| 19   | 360002      | Alternator, 24 V               |                  |   | 1 |
| 20   | #           | Washer, M10                    | 1                |   |   |
| 21   | #           | Nut, M10                       | 1                |   |   |
| 22   | 360589      | Capacitor                      |                  | 1 | 1 |
| 23   | 360591      | Voltage regulator              |                  | 1 |   |
| 23   | 360590      | Voltage regulator              |                  |   | 1 |
| 24   | 360592      | Screen                         |                  | 1 | 1 |

# Common hardware, procure locally.

# Group 51b: Alternator Brackets



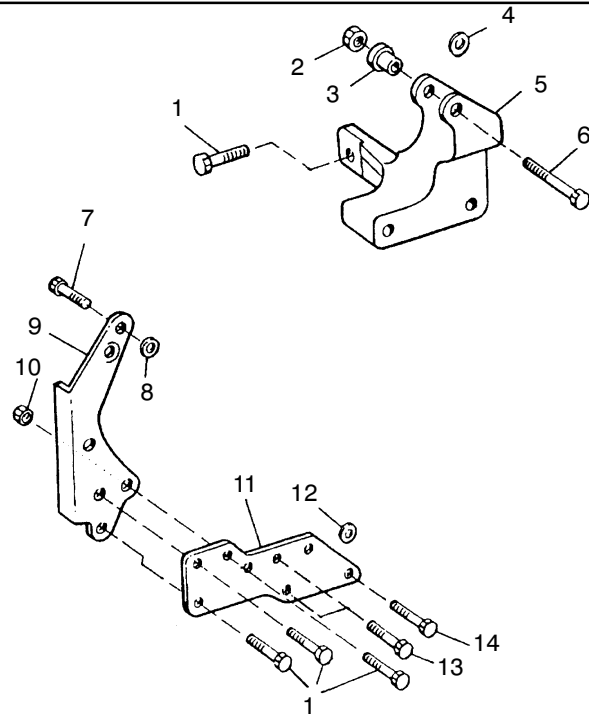
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TP26846  
 (was TP25660)

| Item | Part Number | Description                    | Quantity         |
|------|-------------|--------------------------------|------------------|
|      |             |                                | Variation Number |
| 1    | not used    |                                | 1                |
| 2    | #           | Washer, 13/32 x 23/32 x 0.120" | 1                |
| 3    | #           | Washer, 3/8" lock              | 1                |
| 4    | #           | Screw, 3/8-16 x 2-1/4" cap     | 1                |
| 5    | 223625      | Strap                          | 1                |
| 6    | #           | Washer, 11/32 x 1 x 0.194"     | 1                |
| 7    | #           | Washer, 5/16" lock             | 1                |
| 8    | #           | Screw, M8 x 25                 | 1                |
| 9    | #           | Screw, 3/8-16 x 3-1/2"         | 2                |
| 10   | #           | Screw, M10 x 75                | 1                |
| 11   | 223624      | Bracket                        | 1                |
| 12   | #           | Spacer, 0.423 x 0.675 x 1"     | 2                |
| 13   | #           | Washer, 11/32 x 7/8 x .06"     | 1                |
| 14   | #           | Washer, M10 lock               | 1                |
| 15   | #           | Nut, M10                       | 1                |
| 16   | #           | Nut, 3/8"                      | 2                |
| 17   | 223500      | Bracket                        | 1                |
| 18   | #           | Washer, 13/32 x 23/32 x 0.12"  | 2                |

# Common hardware, procure locally.

# Group 51b: Alternator Brackets



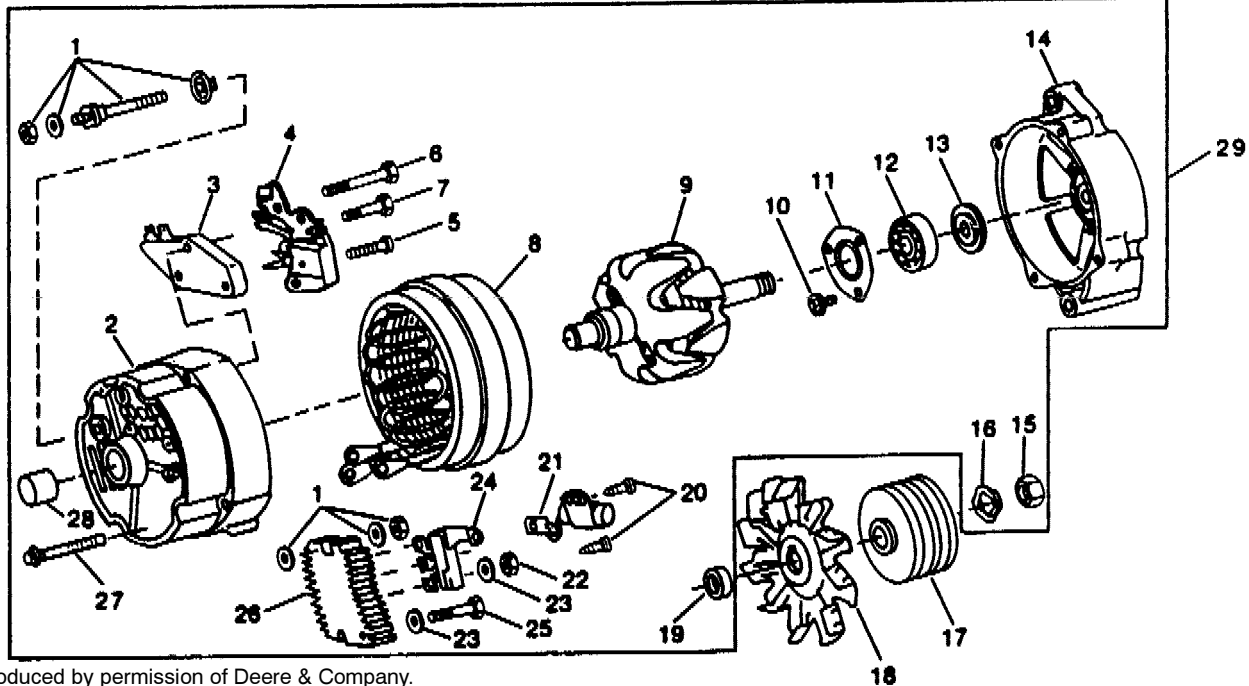
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TP53280

| Item | Part Number | Description                      | Quantity           |
|------|-------------|----------------------------------|--------------------|
|      |             |                                  | Variation Number 2 |
| 1    | #           | Screw, M10 x 30                  | 5                  |
| 2    | #           | Flange Nut, M10                  | 1                  |
| 3    | 360076      | Bushing                          | 1                  |
| 4    | 360166      | Washer, thrust                   | 1                  |
| 5    | 360150      | Bracket                          | 1                  |
| 6    | #           | Screw, M10 x 100                 | 1                  |
| 7    | #           | Screw, M8 x 25                   | 1                  |
| 8    | #           | Washer, 8.128 x 15.748 x 3.937mm | 1                  |
| 9    | 360156      | Bracket                          | 1                  |
| 10   | #           | Flange Nut, M10                  | 3                  |
| 11   | 360155      | Support                          | 1                  |
| 12   | #           | Washer                           | 1                  |
| 13   | #           | Screw, M10 x 25                  | 2                  |
| 14   | #           | Screw, M8 x 60                   | 2                  |

# Common hardware, procure locally.

# Group 51c: Alternator Components



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TP26835

| Item | Part Number | Description                     | Quantity         |
|------|-------------|---------------------------------|------------------|
|      |             |                                 | Variation Number |
|      |             |                                 | 1                |
| 1    | X           | Terminal                        | 1                |
| 2    | X           | Housing                         | 1                |
| 3    | X           | Regulator, voltage              | 1                |
| 4    | X           | Holder, carbon brush            | 1                |
| 5    | X           | Screw                           | 1                |
| 6    | X           | Screw                           | 1                |
| 7    | X           | Screw                           | 2                |
| 8    | X           | Stator (78 amp)                 | 1                |
| 9    | X           | Rotor                           | 1                |
| 10   | #           | Screw, #10 x 1/2"               | 3                |
| 11   | X           | Retainer                        | 1                |
| 12   | X           | Bearing                         | 1                |
| 13   | X           | Shim                            | 1                |
| 14   | X           | Housing                         | 1                |
| 15   | X           | Nut                             | 1                |
| 16   | X           | Washer                          | 1                |
| 17   | 224283      | Sheave (pulley, single groove)  | 1                |
| 18   | 224282      | Fan                             | 1                |
| 19   | X           | Washer (outer)                  | 1                |
| 20   | #           | Screw, #8 x 5/8"                | 2                |
| 21   | X           | Capacitor                       | 1                |
| 22   | #           | Nut, .164"                      | 3                |
| 23   | #           | Washer, #8                      | 3                |
| 24   | X           | Diode (trio, negative)          | 1                |
| 25   | #           | Screw, #8 x 7/8"                | 1                |
| 26   | X           | Rectifier (bridge, positive)    | 1                |
| 27   | X           | Bolt                            | 4                |
| 28   | X           | Bearing, roller                 | 1                |
| 29   | 224244      | Alternator (w/volt. reg. & fan) | 1                |

# Common hardware, procure locally.

X Item not sold separately.



