

## 4. SPECIFICATION FOR MAJOR COMPONENTS

### 1) ENGINE

| Item                                | Specification   |
|-------------------------------------|---|
| Model                               | Cummins QSM 11  |
| Type                                | 4-cycle turbocharged, charge air cooled diesel engine |
| Control type                        | Electronic control                                    |
| Cooling method                      | Water cooling   |
| Number of cylinders and arrangement | 6 cylinders, in-line                                  |
| Firing order                        | 1-5-3-6-2-4   |
| Combustion chamber type             | Direct injection type                                 |
| Cylinder bore × stroke              | 125 × 147mm(4.92" × 5.79")                            |
| Piston displacement                 | 10800cc(659cu in)                                     |
| Compression ratio                   | 16.3 : 1  |
| Rated gross horse power             | 340ps at 2000rpm                                      |
| Maximum gross torque at 1400rpm     | 171kgf · m(1235lb · ft)                               |
| Engine oil quantity                 | 38 l (10 U.S. gal)                                    |
| Wet weight                          | 984kg(2170lb)   |
| High idling speed                   | 2130 ± 50rpm  |
| Low idling speed                    | 800 ± 50rpm   |
| Rated fuel consumption              | 162g/ps · hr  |
| Starting motor                      | Delco Remy 42MT(24V)                                  |
| Alternator                          | Delco Remy 22SI(24V-70Amp)                            |
| Battery                             | 2 × 12V × 200Ah                                       |

## 2) MAIN PUMP(+BRAKE PUMP)

| Item                       | Specification                       |                                  |
|----------------------------|-------------------------------------|----------------------------------|
|                            | Main pump                           | Brake pump                       |
| Type                       | Fixed displacement double vane pump |                                  |
| Capacity                   | 113.5cc/rev                         | 15.9cc/rev                       |
| Maximum operating pressure | 210kgf/cm <sup>2</sup> (2987psi)    | 150kgf/cm <sup>2</sup> (2130psi) |
| Rated oil quantity         | 212 l /min(56U.S.gpm)               | 30 l /min(7.9U.S.gpm)            |
| Rated speed                | 2000rpm                             |                                  |

## 3) STEERING PUMP(+FAN PUMP)

| Item                       | Specification                       |                                  |
|----------------------------|-------------------------------------|----------------------------------|
|                            | Steering pump                       | Fan pump                         |
| Type                       | Fixed displacement double vane pump |                                  |
| Capacity                   | 137.5cc/rev                         | 24.9cc/rev                       |
| Maximum operating pressure | 210kgf/cm <sup>2</sup> (2987psi)    | 140kgf/cm <sup>2</sup> (1990psi) |
| Rated oil quantity         | 270 l /min(71.3U.S.gpm)             | 49 l /min(12.9U.S.gpm)           |
| Rated speed                | 2000rpm                             |                                  |

## 4) MAIN CONTROL VALVE

| Item                                   | Specification                    |
|--|----------------------------------|
| Type                                   | 2 spool                          |
| Operating method                       | Hydraulic pilot assist           |
| Main relief valve pressure             | 210kgf/cm <sup>2</sup> (2987psi) |
| Overload relief valve pressure(Boom)   | 240kgf/cm <sup>2</sup> (3414psi) |
| Overload relief valve pressure(Bucket) | 240kgf/cm <sup>2</sup> (3414psi) |

## 5) REMOTE CONTROL VALVE

| Item                    | Specification          |                                  |
|-------------------------|------------------------|----------------------------------|
| Type                    | Pressure reducing type |                                  |
| Operating               | Minimum                | 5.8kgf/cm <sup>2</sup> (82.5psi) |
|                         | Maximum                | 24kgf/cm <sup>2</sup> (341psi)   |
| Single operation stroke | Lever                  | 75mm(3.0in)                      |

## 6) CYLINDER

| Item              |                             | Specification         |
|-------------------|-----------------------------|-----------------------|
| Boom cylinder     | Bore dia × Rod dia × Stroke | ∅ 200 × ∅ 110 × 863mm |
| Bucket cylinder   | Bore dia × Rod dia × Stroke | ∅ 160 × ∅ 80 × 580mm  |
| Steering cylinder | Bore dia × Rod dia × Stroke | ∅ 110 × ∅ 55 × 480mm  |

## 7) DYNAMIC POWER TRAIN DEVICES

| Item         |                | Specification   |                            |
|--------------|----------------|---|----------------------------|
| Transmission | Model          | ZF 4WG310   |                            |
|              | Type           | Converter   | Single-stage, single-phase |
|              |                | Transmission  | Full-automatic power shift |
|              | Gear shift     | Forward fourth gear, reverse third gear   |                            |
|              | Adjustment     | Electrical single lever type, kick-down system,<br>Automatic kick down from 2nd to 1st gear<br>FNR Switch on joystick lever(option) |                            |
| Axle         | Drive devices  | 4-wheel drive   |                            |
|              | Front          | Front fixed location  |                            |
|              | Rear           | Oscillation 13° of center pin-loaded  |                            |
| Wheels       | Tires          | 29.5-25, 22PR(L3)   |                            |
| Brakes       | Travel         | Four-wheel, wet-disc type, full hydraulic   |                            |
|              | Parking        | Spring applied, hydraulic released brake on front axle  |                            |
| Steering     | Type           | Full hydraulic, articulated   |                            |
|              | Steering angle | 40° to both right and left angle, respectively  |                            |