**Engine**
- **Volvo TAD551 VE, Tier III (optional TAD571 VE Tier 4f), 4 cycle, inline 4 cylinder, liquid cooled, electronic controlled**
- Vertical canister style lube and main fuel filters and fuel/water separation with manual feed pump attached to engine
- Water in fuel indicator and alarm
- **Gross rating:** 173 hp @ 2200 rpm (129kW)
- 590 ft lb torque @ 1100-1500 rpm (800Nm)
- **Net rating:** 153 hp @ 2200 rpm (114kW)
- Variable viscous fan clutch system
- Vertical stacked hydraulic oil cooler, charge air cooler and radiator
- Block heater
- **Maximum slope:** 30°
- 24 volt starter
- 100 amp alternator
- Two SAE #C31-S 1000 CCA batteries
- Two-stage dry type air cleaner with centrifugal pre-cleaner and safety element
- Vacuator valve and service indicator

**Fuel tank capacity:** 82 gallons (310 L)

**Controls**
- Two electronic joysticks (hoist and bucket, telescope and swing)
- One rocker switch (tilt) control
- Joysticks on arm pods
- Quick change joystick pattern switch on instrument panel
- Self-centering joysticks; When controls are released, power for movement disengages and swing and tilt brake sets automatically
- Two electric foot pedals (with handles) control crawler travel speed and direction, crawler steering and braking
- Toggle switch on arm pod allows selection of two crawler speed ranges

**Engine Controls and Instrumentation**
- Key operated ignition/starter switch, throttle and main battery disconnect switch
- Air cleaner condition indicator
- Electronic monitor indicates fuel level, low battery charge, lube oil pressure, high coolant temperature, engine rpm and engine hours with shutdown protocol
- Fuel saving feature automatically sends engine rpm to idle when control circuits are in neutral for seven seconds

**Hydraulic System**

**Pumps**
- One load-sensing axial piston pump oil flow 0-110 gpm (0-416 L/min)
- Pilot gear pump 6 gpm (23 L/min)

**System Monitor**
- Electronic monitor in cab indicates:
  - Low hydraulic fluid level with shutdown
  - High hydraulic fluid temperature
  - System working pressure
  - System pilot pressure

**SYSTEM SPECIFICATIONS**

**Four Cylinders**
- One tool: 5.0” ID, 3.0” rod, (127 mm x 76 mm), 25.9” (658 mm) stroke
- Two hoist: 4.25” ID, 3.0” rod, (108 mm x 76 mm), 53.43” (1357 mm) stroke
- One telescope: 4.5” ID, 3.25” rod, (127 mm x 83 mm) 136” (3.94 m) stroke

**Four Hydraulic Motors**
- Swing, 68 hp (51 kW)
- Tilt, 28 hp (21 kW)
- Two propel motors, 120 hp (89 kW) each

**Operating Pressures**
- Hoist.........................4,900 psi (331 BAR)
- Tilt.........................2,400 psi (165 BAR)
- Swing.........................4,500 psi (310 BAR)
- Tool.........................4,900 psi (331 BAR)
- Telescope.....................3,300 psi (228 BAR)
- Propel.......................4,900 psi (331 BAR)

**Oil Capacity**
- System 95 gallon (360 L)
- Pressurized reservoir with visual oil level gauges

**Filtration System**
- 10 micron return filter
- 10 micron pilot filter
- Fin and tube-type oil cooler with thermal by-pass and relief valves
- Pressure-compensated, load-sensing valves with circuit reliefs in all circuits

**Crawler Drive**
- Dual range, high torque piston motor powers each track
- Planetary crawler drive with integral park brake
- **Travel speed** on flat, level surface
  - High Speed 2.0 mph (3.2 km/h)
  - Low Speed 1.0 mph (1.6 km/h)
- Automatic two-speed control shifts crawler drive into low speed under difficult travel conditions
- Manual override selector switch to lock travel in low speed

**Gradeability**
- 88%, limited by engine lubrication requirements

**Drawbar Pull**
- 65,205 lbs (290 kN)

**Track Width:** 31.5” (800 mm)
**Track Length:** (sprocket - idler) 149.5” (3795 mm)
**Average Ground Pressure:** 8.18 psi (0.58 kg/cm²)
Dimensions

A1 Overall length (boom level) with scaling hook: 43' 5" (13.2)
A2 Overall length (boom level) without scaling hook: 41' 3" (12.6)
B1 Overall height (boom level): 12' 3" (3.7)
C1 Width of upperstructure: 13' 6" (4.1)
D Minimum clearance, upperstructure to undercarriage: 5' (1.5)
E Swing clearance, rear of upperstructure: 10'0" (3.0)
F1 Top of cab guard to groundline (cab level): 11' 6" (3.5)
F2 Top of cab guard to groundline (cab at full tilt): 12' 3" (3.7)
FA Cab tilt: 25°
G1 Clearance, upperstructure to groundline: 3' 9" (1.1)
G2 Clearance, counterweight to groundline: 3' 11" (1.2)
J1 Axis of rotation to centerline of drive sprockets: 6' 2" (1.9)
J2 Nominal distance between centerlines of drive sprockets and idlers: 12' 6" (3.8)
J3 Axis of rotation to end of track assembly: 7' 7" (2.3)
J4 Nominal overall length of track assembly: 15' 3" (4.6)
K1 Width of chassis, outside of tracks: 11' 1" (3.4)
K2 Width of chassis, outside of steps: 12' 0" (4.1)
N Ground clearance: 2' 3" (700 mm)
V Track gauge, roller centerline to roller centerline: 8' 6" (2.6)
Y Width of crawler track assembly: 31.5" (800 mm)
AA Maximum radius at groundline: 48' 0" (14.8)
AB Maximum depth: 12' 5" (3.8)
AH Minimum radius at groundline: 33' 0" (10.1)
AK Boom pivot to groundline: 7' 10" (2.4)
AL Boom pivot to axis of rotation: 6' 140 mm)
AP Scaling hook tooth radius: 4' 5" (1.3)
AQ Boom pivot angle: 52° Up & 23° Down
AS Attachment pivot angle: 114°
AU Maximum telescoping boom length (boom pivot to attachment pivot): 44' 9" (13.6)
AV Minimum telescoping boom length (boom pivot to attachment pivot): 31' 8" (9.6)
AW Telescoping boom travel: 13' 1" (4.0)
AX Boom tilt angle (continuous): 360°
BA Maximum radius of working equipment: 48' 8" (14.8)
BB Maximum height of working equipment: 48' 2" (14.7)
BD Minimum clearance of scaling tooth, with attachment at maximum height: 43' 8" (13.3)
BE Minimum clearance of scaling tooth at minimum boom height: 33' 6" (10.2)
BG Maximum height of working equipment, with boom below groundline: 12' 10" (3.9)

Swing

- Priority swing circuit with axial piston motor
- Planetary transmission
Swing speed: 70 rpm
Swing Brake
- Automatic spring-set/hydraulic release wet-disc parking brake
- Dynamic braking provided by hydraulic system

Function Forces

Rated Boom In: 23,210 lbs (103 kN)
Rated Boom Out: 27,357 lbs (122 kN)
Rated Ripper Tooth Force: 19,888 lbs (89 kN)
Boom Rotating Torque: 18,375 ft lb (24913 Nm)
Boom Rotating Speed: 5.3 rpm

Weight

- Approximate working weight with hammer, fuel tank half full and no operator

<table>
<thead>
<tr>
<th>Pad Size</th>
<th>Weight</th>
<th>Bearing Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.5&quot; 800 mm</td>
<td>77500 lbs (35153 kg)</td>
<td>11.4 psi (78.6 kPa)</td>
</tr>
</tbody>
</table>

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