SEBM029000

# SHOP MANUAL

KOMATSU®

# D475A-3

## (PALM CONTROL SPECIFICATION)

MACHINE MODEL SERIAL No.

**D475A-3** **10727 and up**

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subject to change without notice.

- D475A-3 mounts the SDA12V140E-1 engine.
  For details of the engine, see the 12V140-1 Series Engine Shop Manual.

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# SPECIFICATIONS

## • SEMI U-TILTDOZER, U-TILTDOZER

| Machine model | | | | D475A-3 |
|---|---|---|---|---|
| Serial No. | | | | 10727 and up |
| Weight | Operating weight | | | |
| | • Bare tractor | | kg | 75,700 |
| | • With above + semi U-dozer | | | 91,850 |
| | • With above + variable giant ripper | | | 99,150 |
| | • With above + ROPS cab + air conditioner + perforated side cover | | | 100,500 |
| Performance | Min. turning radius | | m | 4.6 |
| | Gradeability | | deg | 30 |
| | Stability (front, rear, left, fight) | | deg | 35 |
| | Speed ranges | Forward 1st | km/h | 0 – 3.5 |
| | | Forward 2nd | | 0 – 6.3 |
| | | Forward 3rd | | 0 – 10.9 |
| | | Reverse 1st | km/h | 0 – 4.7 |
| | | Reverse 2nd | | 0 – 8.4 |
| | | Reverse 3rd | | 0 – 14.3 |
| | Ground pressure | Bare tractor | kPa (kg/cm²) | 119 (1.22) |
| | | With semi U-dozer | | 145.2 (1.48) |
| | | With semi U-dozer + variable giant ripper | | 156 (1.60) |
| | | With above + ROPS cab + air conditioner + perforated side cover | | 159 (1.62) |
| Dimensions | Overall length | Bare tractor | mm | 6,420 |
| | | With semi U-dozer | | 8,710 |
| | | With semi U-dozer + variable giant ripper | | 11,570 |
| | | With U-dozer + variable giant ripper | | 11,950 |
| | Overall Width | Bare tractor | mm | 3,610 |
| | | With semi U-dozer | | 5,265 |
| | | With U-dozer | | 6,205 |
| | Overall height | To top of ROPS | mm | 4,570 |
| | | To tip of exhaust pipe | | 4,420 |
| | | To top of intake duct | | 3,760 |



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| Machine model | | | | D475A-3 |
|---|---|---|---|---|
| Serial No. | | | | 10727 and up |
| Dimensions | Track gauge | | mm | 2,770 |
| | Length of track on ground | | | 4,365 |
| | Track shoe width | | | 710 |
| | Min. ground clearance | | | 655 |
| Engine | Name | | | SDA12V140E-1 |
| | Type | | | 4-cycle, water-cooled, V-type, vertical type, direct injection, with turbocharger, aftercooler |
| | No. of cylinders – bore x stroke | | mm | 12 – 140 x 165 |
| | Piston displacement | | ℓ (cc) | 30.48 (30,480) |
| | Performance | Rated horsepower | kW/rpm (HP/rpm) | 641/2,000 (860/2,000) |
| | | Max. torque | Nm/rpm (kgm/rpm) | 3,825/1,400 (390/1,400) |
| | | Max. speed at no load | rpm | 2,150 |
| | | Min. speed at no load | rpm | 600 |
| | | Min. fuel consumption ratio | g/kW-h (g/HP-h) | 204 (152) |
| | Starting motor | | | 24 V, 7.5 kW x 2 |
| | Alternator | | | 24 V, 75 A |
| | Battery | | | 12 V, 200 Ah x 4 |
| | Radiator core type | | | D type |
| Power train system | Torque coveter | | | 3-element, single stage, single phase (with lock up clutch) |
| | Transmission | | | Planetary gear type, multiple disc clutch, hydraulically actuated, force-feed lubrication gear pump, forward 3 speed, reverse 3 speed |
| | Bevel gear shaft | | | Spiral bevel gear, splash type lubrication |
| | Steering clutch | | | Wet type, multiple clutch disc, spring boosted, hydraulically actuated (manual type), interconnected with brake |
| | Steering brake | | | Wet type, multiple clutch disc, spring boosted, hydraulically actuated (pedal operated, manually operated), interconnected with clutch |
| | Final drive | | | Spur gear 1-stage, planetary gear 1-stage reduction gear, splash type lubrication |



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| Serial No. | | | | 10727 and up |
| Undercarriage | Suspension | | | Rigid, balancing beam type |
| | Carrier roller | | | 2 on each side |
| | Track roller | | | 7 on each side |
| | Track shoe | | | Assembly type, single grouser, 40 each side, pitch: 317.5 mm, width: 710 mm |
| Power train + lubrication pump (tandem) | | | | Gear type (BAL160 + 160 + 112) |
| Scavenging pump (tandem) | | | | Gear type (BAR63 + 320) |
| PPC control pump (tandem with assist pump) | | | | Gear type (SAR(1)032) |
| Work equipment hydraulic system | Max. pressure | | MPa (kg/cm²) | 20.6 (210) |
| | Hydraulic pump | Type | | Gear type, tandem (SAL(4)140 + (3)100) |
| | | Discharge (at engine speed 2,000 rpm) | ℓ/min | 465 |
| | Assist pump | Type | | Gear type (SAR(3)100) (tandem with PPC control pump) |
| | | Discharge (at engine speed 2,000 rpm) | ℓ/min | 193 |
| | Main control valve | Type | | |
| | | For blade lift | | 1-spool pilot spool type, with demand spool |
| | | For blade tilt, ripper (Lo) | | 3-spool pilot spool type |
| | | For ripper (Hi) | | 2-spool pilot spool type |
| | Hydraulic cylinders | Type | | Double acting, piston type |
| | | Dimensions of blade lift cylinder: Cylinder bore | mm | 180 |
| | | Dimensions of blade lift cylinder: Outside diameter of piston rod | mm | 110 |
| | | Dimensions of blade lift cylinder: Piston stroke | mm | 1,781 |
| | | Dimensions of blade lift cylinder: Max. distance between pins | mm | 3,121 (3,121) |
| | | Dimensions of blade lift cylinder: Min. distance between pins | mm | 1,340 (1,340) |
| | | Dimensions of blade tilt cylinder: Cylinder bore | mm | 250 |
| | | Dimensions of blade tilt cylinder: Outside diameter of piston rod | mm | 140 |
| | | Dimensions of blade tilt cylinder: Piston stroke | mm | 285 |
| | | Dimensions of blade tilt cylinder: Max. distance between pins | mm | 1,983 |
| | | Dimensions of blade tilt cylinder: Min. distance between pins | mm | 1,698 |

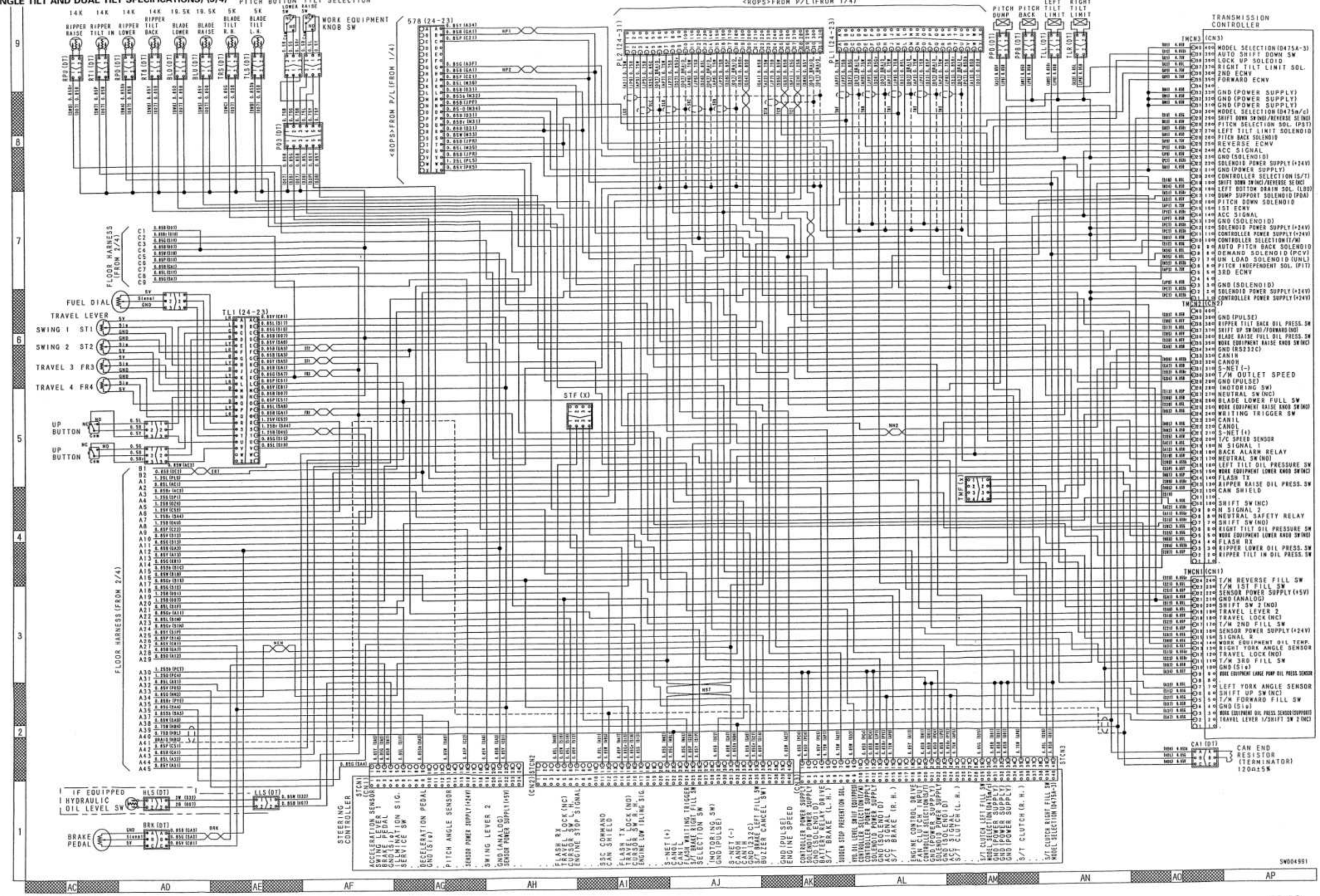
★ The figures in ( ) show the dimensions for the U-blade.



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# ELECTRICAL CIRCUIT DIAGRAM

## CHASSIS ELECTRICAL CIRCUIT DIAGRAM (SINGLE TILT AND DUAL TILT SPECIFICATIONS) (3/4)




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