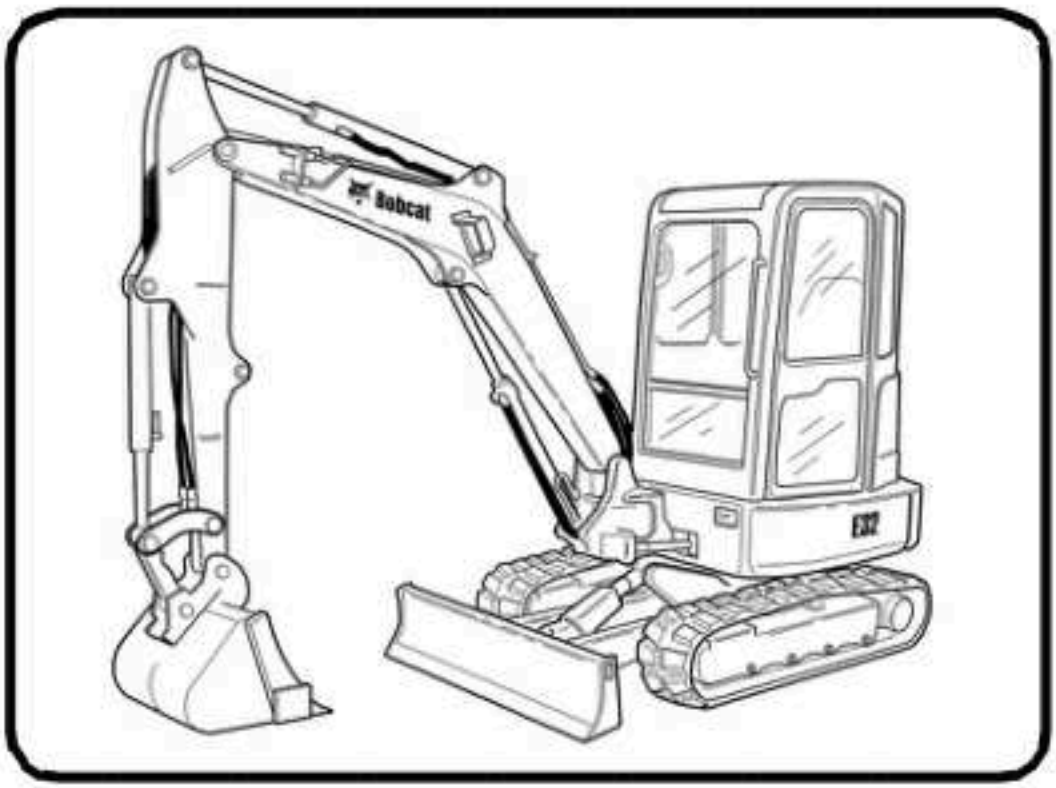
Bobcat®

Service Manual
E32 Compact Excavator

S/N A94H11001 & Above
S/N AC2N11001 & Above



6987272 (2-11)

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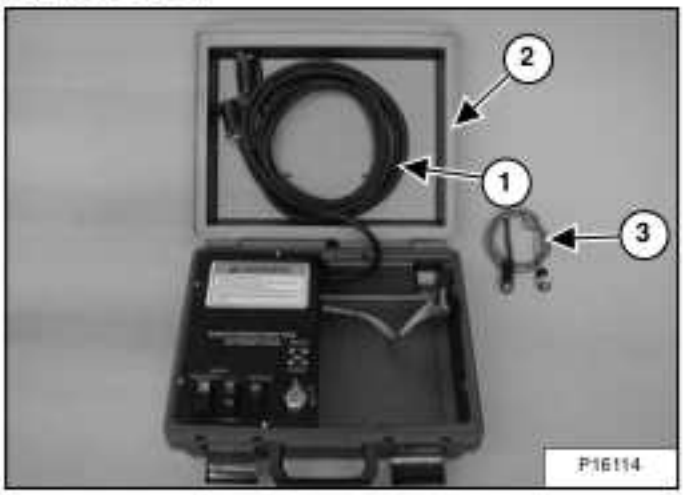
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REMOTE START TOOL-MEL1563 (CONT'D)

Service Tool Harness Control - MEL1565

Figure 10-220-4



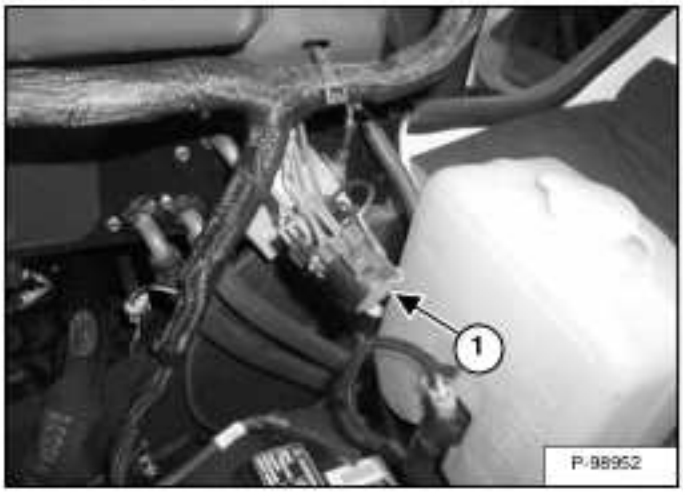
The service tool harness control (Item 1) is used to connect the remote start tool (Item 2) **[Figure 10-220-4]** to the electrical system on the excavator.

The service tool harness communicator (Item 3) **[Figure 10-220-4]** is used to connect the remote start tool to the Service PC.

NOTE: Make all connections with the key or keyless panel in the OFF position.

Open the right side cover.

Figure 10-220-5



Remove the plug (Item 1) **[Figure 10-220-5]** from the excavator harness connector.

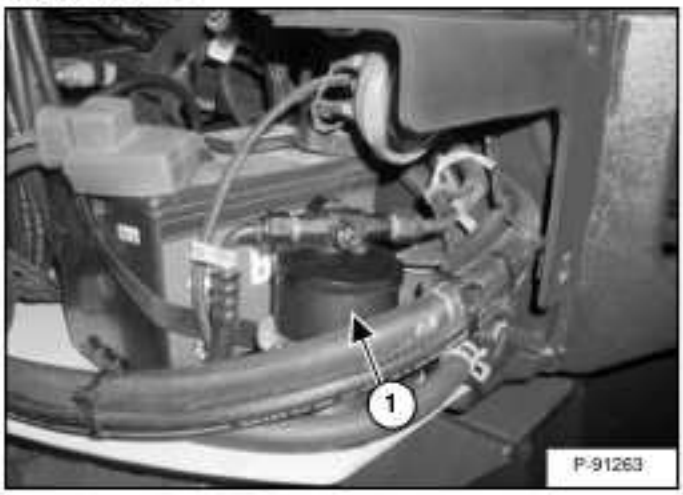
Connect the service tool harness control (MEL1565) to the excavator harness connector.

Connect the service tool harness communicator (MEL1566) to the designated serial port on the Service PC.

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HVAC Repair And Leaks

Figure 70-30-3



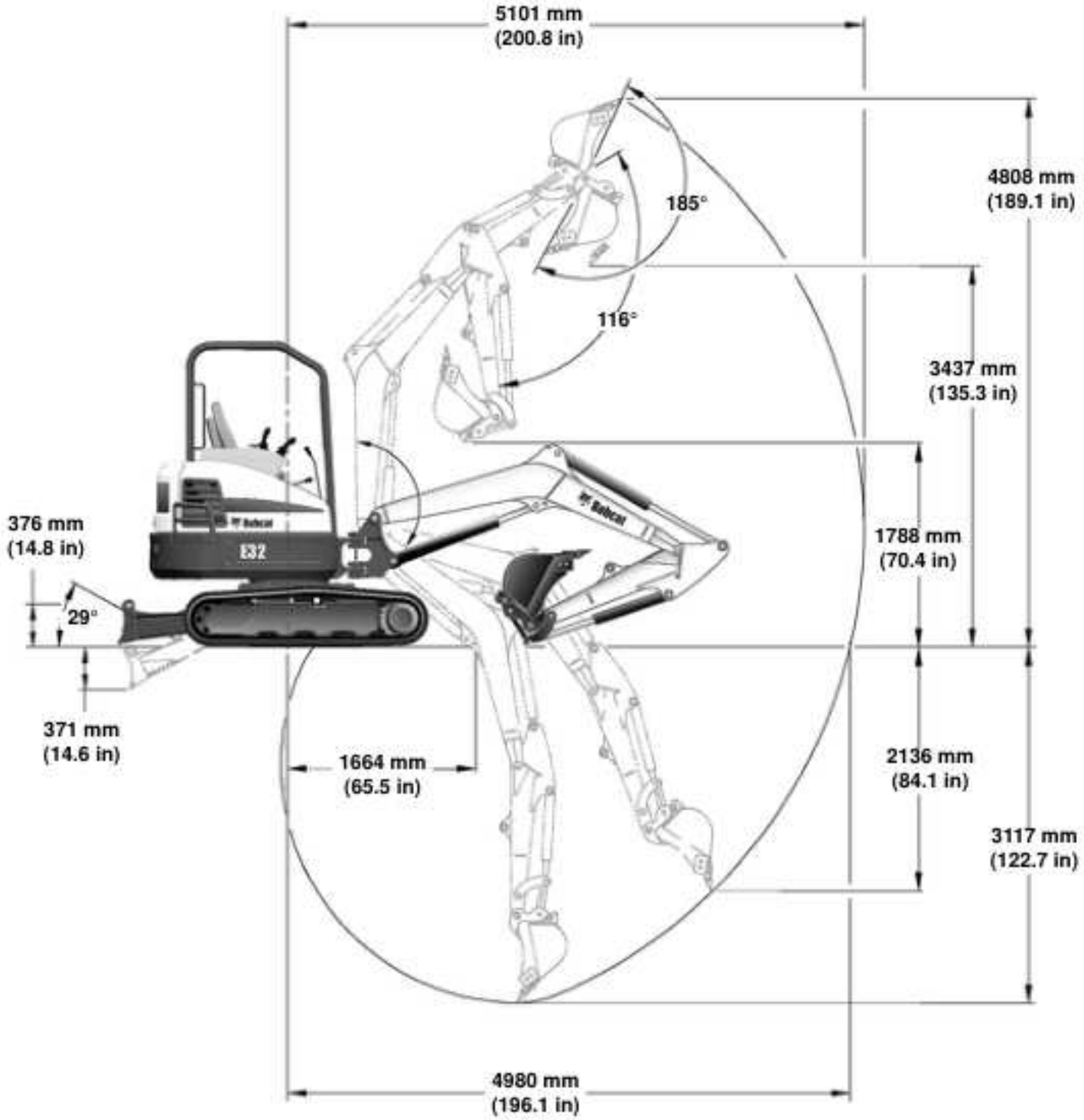
Whenever the A/C system is opened to the atmosphere or there has been a leak in the system, the receiver / dryer (Item 1) **[Figure 70-30-2]** must be changed.

Never leave hose fittings, compressor fittings or components uncapped while working on the A/C system.

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Machine Dimensions (Standard Arm)

- All dimensions are shown in millimeters. Respective imperial dimensions are given in inches enclosed by parentheses.
- Where applicable, specification conform to SAE or ISO standards and are subject to change without notice.



NA1477A

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E32 HYDRAULIC/HYDROSTATIC SCHEMATIC
S/N AC2N11001 AND ABOVE

(PRINTED FEBRUARY 2010)
V-1345legend

LEGEND

(1) HYDRAULIC RESERVOIR: Pressurized with Fill Strainer
Reservoir Capacity (at Site Gauge) . . . . . 9,5 L (10.0 qt)
System Capacity . . . . 22,7 L (24.0 qt)

(2) PRESSURIZED BREATHER/FILL CAP with FILTER:
41,4 kPa (0,41 bar) (6 psi) – Outlet
4,1 kPa (0,04 bar) (0.6 psi) - Inlet

(3) HYDRAULIC FILTER ELEMENT: 15 Micron

(4) FILTER BY-PASS
345 kPa (3.44 bar) (50 psi)

(5) CASE DRAIN FILTER - with By-Pass
Element - 40 Micron
By-Pass – 124 – 159 kPa (1,2 – 1,6 bar) (18 - 23 psi)

(6) PRESSURE SWITCH - Hydraulic

(7) HYDRAULIC PISTON PUMP . . . . . .
100,8 L/min (26.6 gpm) at High Engine RPM

(8) ON STROKE PISTON

(9) PUMP MARGIN SPOOL -
1400 kPa (14 bar) (203 psi)

(10) TORQUE LIMITER

(11) DESTROKE PISTON

(12) ORIFICE- Fine Control: 0,6 mm (0.102 in)

(13) ORIFICE – PC: 0,6 mm (0.041 in)

(14) HYDRAULIC GEAR PUMP
9,5 L/min (2.5 gpm) at High Engine RPM

(15) PRESSURE SWITCH – Motion Alarm (If Equipped)

(16) SHUTTLE VALVE – Motion Alarm (If Equipped)

(17) PRESSURE REDUCING VALVE
2999 kPa (30 bar) (435 psi)

(18) CHECK VALVE - Accumulator

(19) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE – Boom Offset / Secondary Auxiliary Hydraulics – If Equipped)

(20) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE – Boom Offset / Secondary Auxiliary Hydraulics – If Equipped)

(21) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - Two Speed

(22) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - Work group Lockout

(23) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - Male Coupler

(24) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - Female Coupler

(25) ACCUMULATOR

(26) MAIN RELIEF VALVE
24497 kPa (245 bar) (3553 psi)

(27) PRESSURE SENSOR – Auto Idle

(28) FILTER – Control Valve

(29) ORIFICE - 0,4 mm (0.016 in)

(30) COMPENSATOR

(31) PORT RELIEF VALVE (With Anti-Cavitation) - (BUCKET Cylinder) 27000 kPa (270 bar) (3916 psi)

(32) PORT RELIEF VALVE (With Anti-Cavitation) - (BUCKET Cylinder) 27000 kPa (270 bar) (3916 psi)

(33) PORT RELIEF VALVE (With Anti-Cavitation) - (ARM Cylinder) 27000 kPa (270 bar) (3916 psi)

(34) PORT RELIEF VALVE (With Anti-Cavitation) - (ARM Cylinder) 27000 kPa (270 bar) (3916 psi)

(35) PORT RELIEF VALVE - (With Anti-Cavitation Valve) - (Auxiliary Pressure Port: 20684 kPa (206 bar) (3000 psi)

(36) PORT RELIEF VALVE (With Anti-Cavitation Valve) - (Auxiliary Return Port: 20684 kPa (206 bar) (3000 psi)

(37) PORT RELIEF VALVE (With Anti-Cavitation) - (Boom Cylinder) 27000 kPa (270 bar) (3916 psi)

(38) PORT RELIEF VALVE (With Anti-Cavitation) - (Boom Cylinder) 27000 kPa (270 bar) (3916 psi)

(39) PORT RELIEF VALVE (With Anti-Cavitation) - (Bucket Cylinder) 27000 kPa (270 bar) (3916 psi)

(40) SHUTTLE VALVE

(41) FLUSHING VALVE: 2503 kPa (25 bar) (363 psi)

(42) UNLOAD ORIFICE: 0,7mm (0.028 in)

(43) ORIFICE – Load Sense - 1,5 mm (0.059 in)

(44) CHECK VALVE: 310 kPa (3,1 bar) (45 psi)

(45) CHECK VALVE: 414 kPa (4,2 bar) (60 psi)

(46) DRIVE MOTOR SHUTTLE - With restrictors

(47) VALVE - 2 -Speed / Auto Shift

(48) PISTON – Two Speed (2)

(49) CROSSPORT RELIEF VALVE (Ramp Pressure Increasing Type):
Set @: 21594 kPa (216 Bar) (3132 psi)
Crack Pressure: 18602 kPa (186 Bar) (2698 psi)

(50) ANTI-CAVITATION VALVE (2)

(51) PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - Sequence Valve

(52) TIMER VALVE: 2503 kPa (25 Bar) (363 psi)

(53) ORIFICE - 0,4 mm (0.016 in)

(54) CHECK VALVE – Brake Release

(55) PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - Second Auxiliary (Optional)

(56) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - Second Auxiliary (2) (Optional)

(57) PORT RELIEF VALVE (With Anti-Cavitation Valve) - (Secondary Auxiliary)
17926 kPa (179 bar) (2600 psi)

(58) PORT RELIEF VALVE (With Anti-Cavitation Valve) - (Secondary Auxiliary)
17926 kPa (179 bar) (2600 psi)

(59) TEST PORT - "JP3" PORT - Pressure Reducing Valve

(60) FACTORY FILL PORT

(61) ANTI-DRIFT VALVE

(62) TEST PORT

(63) ORIFICE – Straight Travel 0.31 inch (0,8 mm)

(64) ORIFICE - Load Holding Valve – Boom (OPTIONAL)

(65) PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - Load Holding Valve – Boom (OPTIONAL)

(66) RELIEF VALVE - Load Holding Valve – Boom (OPTIONAL)

(67) ORIFICE - Load Holding Valve – Arm (OPTIONAL)

(68) PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - Load Holding Valve – Arm (OPTIONAL)

(69) RELIEF VALVE - Load Holding Valve – Arm (OPTIONAL)

(70) CHECK VALVE

(71) DIFFERENTIAL PRESSURE SWITCH:
276 kPa (2,76 bar) (40 psi)
Normally Closed

NOTE: Unless otherwise specified springs have NO significant pressure value.

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