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entry:
  %state.sroa.26 = alloca [20 x i8], align 4
  %entropy1 = getelementptr inbounds %struct.jpeg_compress_struct,
  ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 59
  %0 = bitcast %struct.jpeg_entropy_encoder** %entropy1 to
  ... %struct.huff_entropy_encoder**
  %1 = load %struct.huff_entropy_encoder*, %struct.huff_entropy_encoder** %0,
  ... align 8, !tbaa !3
  %state.sroa.26.0..sroa_idx48 = getelementptr inbounds [20 x i8], [20 x i8]*
  ... %state.sroa.26, i64 0, i64 0
  call void @llvm.lifetime.start(i64 20, i8* %state.sroa.26.0..sroa_idx48)
  %dest = getelementptr inbounds %struct.jpeg_compress_struct,
  ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 5
  %2 = bitcast %struct.jpeg_destination_mgr** %dest to i64**
  %3 = load i64*, i64** %2, align 8, !tbaa !11
  %4 = load i64, i64* %3, align 8, !tbaa !12
  %5 = getelementptr inbounds i64, i64* %3, i64 1
  %6 = load i64, i64* %5, align 8, !tbaa !15
  %state.sroa.18.16..sroa_idx = getelementptr inbounds
  ... %struct.huff_entropy_encoder, %struct.huff_entropy_encoder* %1, i64 0, i32 1,
  ... i32 0
  %state.sroa.18.16.copyload = load i64, i64* %state.sroa.18.16..sroa_idx,
  ... align 8
  %state.sroa.23.16..sroa_idx36 = getelementptr inbounds
  ... %struct.huff_entropy_encoder, %struct.huff_entropy_encoder* %1, i64 0, i32 1,
  ... i32 1
  %state.sroa.23.16.copyload = load i32, i32* %state.sroa.23.16..sroa_idx36,
  ... align 8
  %state.sroa.26.16..sroa_idx = getelementptr inbounds
  ... %struct.huff_entropy_encoder, %struct.huff_entropy_encoder* %1, i64 0, i32 1,
  ... i32 2
  %state.sroa.26.16..sroa_cast = bitcast [4 x i32]*
  ... %state.sroa.26.16..sroa_idx to i8*
  call void @llvm.memcpy.p0i8.p0i8.i64(i8* %state.sroa.26.0..sroa_idx48, i8*
  ... %state.sroa.26.16..sroa_cast, i64 20, i32 4, i1 false)
  %cmp1188.i = icmp sgt i32 %state.sroa.23.16.copyload, 0
  br i1 %cmp1188.i, label %while.body.i.preheader, label %if.end

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while.body.i.preheader:
  %sub6.i = sub i32 17, %state.sroa.23.16.copyload
  %sh_prom7.i = zext i32 %sub6.i to i64
  %shl8.i = shl i64 127, %sh_prom7.i
  %or.i = or i64 %shl8.i, %state.sroa.18.16.copyload
  %add.i = add nsw i32 %state.sroa.23.16.copyload, 7
  br label %while.body.i

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while.body.i:
  %state.sroa.10.0 = phi i64 [ %state.sroa.10.2, %cleanup.i ], [ %6,
  ... %while.body.i.preheader ]
  %state.sroa.0.0 = phi i64 [ %state.sroa.0.2, %cleanup.i ], [ %4,
  ... %while.body.i.preheader ]
  %put_bits.090.i = phi i32 [ %sub39.i, %cleanup.i ], [ %add.i,
  ... %while.body.i.preheader ]
  %put_buffer.089.i = phi i64 [ %shl38.i, %cleanup.i ], [ %or.i,
  ... %while.body.i.preheader ]
  %shr73.i = lshr i64 %put_buffer.089.i, 16
  %conv15.i = trunc i64 %shr73.i to i8
  %7 = inttoptr i64 %state.sroa.0.0 to i8*
  %incdec.ptr.i = getelementptr inbounds i8, i8* %7, i64 1
  %8 = ptrtoint i8* %incdec.ptr.i to i64
  store i8 %conv15.i, i8* %7, align 1, !tbaa !16
  %dec.i = add i64 %state.sroa.10.0, -1
  %cmp16.i = icmp eq i64 %dec.i, 0
  br i1 %cmp16.i, label %if.then18.i, label %if.end21.i

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if.then18.i:
  %9 = load %struct.jpeg_destination_mgr*, %struct.jpeg_destination_mgr**
  ... %dest, align 8, !tbaa !11
  %empty_output_buffer.i.i = getelementptr inbounds
  ... %struct.jpeg_destination_mgr, %struct.jpeg_destination_mgr* %9, i64 0, i32 3
  %10 = load i32 (%struct.jpeg_compress_struct)*, i32
  ... (%struct.jpeg_compress_struct)** %empty_output_buffer.i.i, align 8, !tbaa !17
  %call.i.i = tail call i32 @10(%struct.jpeg_compress_struct* %cinfo) #4
  %tobool.i.i = icmp eq i32 %call.i.i, 0
  br i1 %tobool.i.i, label %if.then, label %dump_buffer.exit.i

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dump_buffer.exit.i:
  %11 = bitcast %struct.jpeg_destination_mgr* %9 to i64*
  %12 = load i64, i64* %11, align 8, !tbaa !12
  %free_in_buffer.i.i = getelementptr inbounds %struct.jpeg_destination_mgr,
  ... %struct.jpeg_destination_mgr* %9, i64 0, i32 1
  %13 = load i64, i64* %free_in_buffer.i.i, align 8, !tbaa !15
  br label %if.end21.i

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if.end21.i:
  %state.sroa.10.1 = phi i64 [ %13, %dump_buffer.exit.i ], [ %dec.i,
  ... %while.body.i ]
  %state.sroa.0.1 = phi i64 [ %12, %dump_buffer.exit.i ], [ %8, %while.body.i ]
  %conv14.i = and i64 %shr73.i, 255
  %cmp22.i = icmp eq i64 %conv14.i, 255
  br i1 %cmp22.i, label %if.then24.i, label %cleanup.i

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if.then24.i:
  %14 = inttoptr i64 %state.sroa.0.1 to i8*
  %incdec.ptr26.i = getelementptr inbounds i8, i8* %14, i64 1
  %15 = ptrtoint i8* %incdec.ptr26.i to i64
  store i8 0, i8* %14, align 1, !tbaa !16
  %dec28.i = add i64 %state.sroa.10.1, -1
  %cmp29.i = icmp eq i64 %dec28.i, 0
  br i1 %cmp29.i, label %if.then31.i, label %cleanup.i

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if.then31.i:
  %16 = load %struct.jpeg_destination_mgr*, %struct.jpeg_destination_mgr**
  ... %dest, align 8, !tbaa !11
  %empty_output_buffer.i76.i = getelementptr inbounds
  ... %struct.jpeg_destination_mgr, %struct.jpeg_destination_mgr* %16, i64 0, i32 3
  %17 = load i32 (%struct.jpeg_compress_struct)*, i32
  ... (%struct.jpeg_compress_struct)** %empty_output_buffer.i76.i, align 8, !tbaa
  ... !17
  %call.i77.i = tail call i32 @17(%struct.jpeg_compress_struct* %cinfo) #4
  %tobool.i78.i = icmp eq i32 %call.i77.i, 0
  br i1 %tobool.i78.i, label %if.then, label %dump_buffer.exit83.i

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dump_buffer.exit83.i:
  %18 = bitcast %struct.jpeg_destination_mgr* %16 to i64*
  %19 = load i64, i64* %18, align 8, !tbaa !12
  %free_in_buffer.i79.i = getelementptr inbounds %struct.jpeg_destination_mgr,
  ... %struct.jpeg_destination_mgr* %16, i64 0, i32 1
  %20 = load i64, i64* %free_in_buffer.i79.i, align 8, !tbaa !15
  br label %cleanup.i

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cleanup.i:
  %state.sroa.10.2 = phi i64 [ %20, %dump_buffer.exit83.i ], [ %dec28.i,
  ... %if.then24.i ], [ %state.sroa.10.1, %if.end21.i ]
  %state.sroa.0.2 = phi i64 [ %19, %dump_buffer.exit83.i ], [ %15,
  ... %if.then24.i ], [ %state.sroa.0.1, %if.end21.i ]
  %shl38.i = shl i64 %put_buffer.089.i, 8
  %sub39.i = add nsw i32 %put_bits.090.i, -8
  %cmp11.i = icmp sgt i32 %sub39.i, 7
  br i1 %cmp11.i, label %while.body.i, label %if.end.loopexit

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if.end.loopexit:
  %state.sroa.0.2.lcssa = phi i64 [ %state.sroa.0.2, %cleanup.i ]
  %state.sroa.10.2.lcssa = phi i64 [ %state.sroa.10.2, %cleanup.i ]
  br label %if.end

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if.end:
  %state.sroa.18.156 = phi i64 [ %state.sroa.18.16.copyload, %if.then ], [ 0,
  ... %entry ], [ 0, %if.end.loopexit ]
  %state.sroa.23.155 = phi i32 [ %state.sroa.23.16.copyload, %if.then ], [ 0,
  ... %entry ], [ 0, %if.end.loopexit ]
  %state.sroa.10.45054 = phi i64 [ 0, %if.then ], [ %6, %entry ], [
  ... %state.sroa.10.2.lcssa, %if.end.loopexit ]
  %state.sroa.0.45153 = phi i64 [ %state.sroa.0.4.ph, %if.then ], [ %4, %entry
  ... ], [ %state.sroa.0.2.lcssa, %if.end.loopexit ]
  %24 = load i64*, i64** %2, align 8, !tbaa !11
  store i64 %state.sroa.0.45153, i64* %24, align 8, !tbaa !12
  %25 = getelementptr inbounds i64, i64* %24, i64 1
  store i64 %state.sroa.10.45054, i64* %25, align 8, !tbaa !15
  store i64 %state.sroa.18.156, i64* %state.sroa.18.16..sroa_idx, align 8
  store i32 %state.sroa.23.155, i32* %state.sroa.23.16..sroa_idx36, align 8
  call void @llvm.memcpy.p0i8.p0i8.i64(i8* %state.sroa.26.16..sroa_cast, i8*
  ... %state.sroa.26.0..sroa_idx48, i64 20, i32 4, i1 false)
  call void @llvm.lifetime.end(i64 20, i8* %state.sroa.26.0..sroa_idx48)
  ret void

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