



NORD Gear Disassembly Manual

DM:011

Revised
4/10/2002

Clincher Reducers: SK1382-SK5382

List of Tools

Following are a list of tools to disassemble the gear motor:

- ✓ Press with 10-30 ton capacity for smaller units, 50-100 ton capacity for larger units.
- ✓ Hoist
- ✓ Circlip pliers (both external and internal)
- ✓ Assorted support blocks
- ✓ Metric sockets & T-handles
- ✓ Screw drivers – Phillips & Flat
- ✓ Rubber Mallet
- ✓ Seal punch

Please Read Carefully Before Attempting To Disassemble Reducer

- ◆ For all bearings, the inner race is press fit onto the shaft and the outer race is installed into the housing by a sliding fit. Gears are press fit, input pinions are shrink fit.
- ◆ As each part is removed, label the part with its corresponding parts list number. When reassembling, each part (or its replacement) must be installed into its original position. Parts list can be found in the operators manual.
- ◆ Care should be taken when removing gears. Avoid contact with any hard object to prevent scratching. After removal, gears should be covered by a soft cloth.
- ◆ All parts should be inspected for damage. Bearings should be replaced as necessary. Gears and shafts should be inspected carefully for pits, corrosion, scratches, bending, etc. If any of these are observed, the part should be replaced to prevent knocking and premature wear.

Important

- ◆ Ensure that the reducer is mounted into the press rigidly.
- ◆ Ensure that parts to be removed are free of obstruction.
- ◆ Use support blocks to safely mount the reducer and properly align the press cylinder to the corresponding part.
- ◆ When a part is being pressed out, place a block of wood underneath to help from damaging the machined metal surfaces of the part.



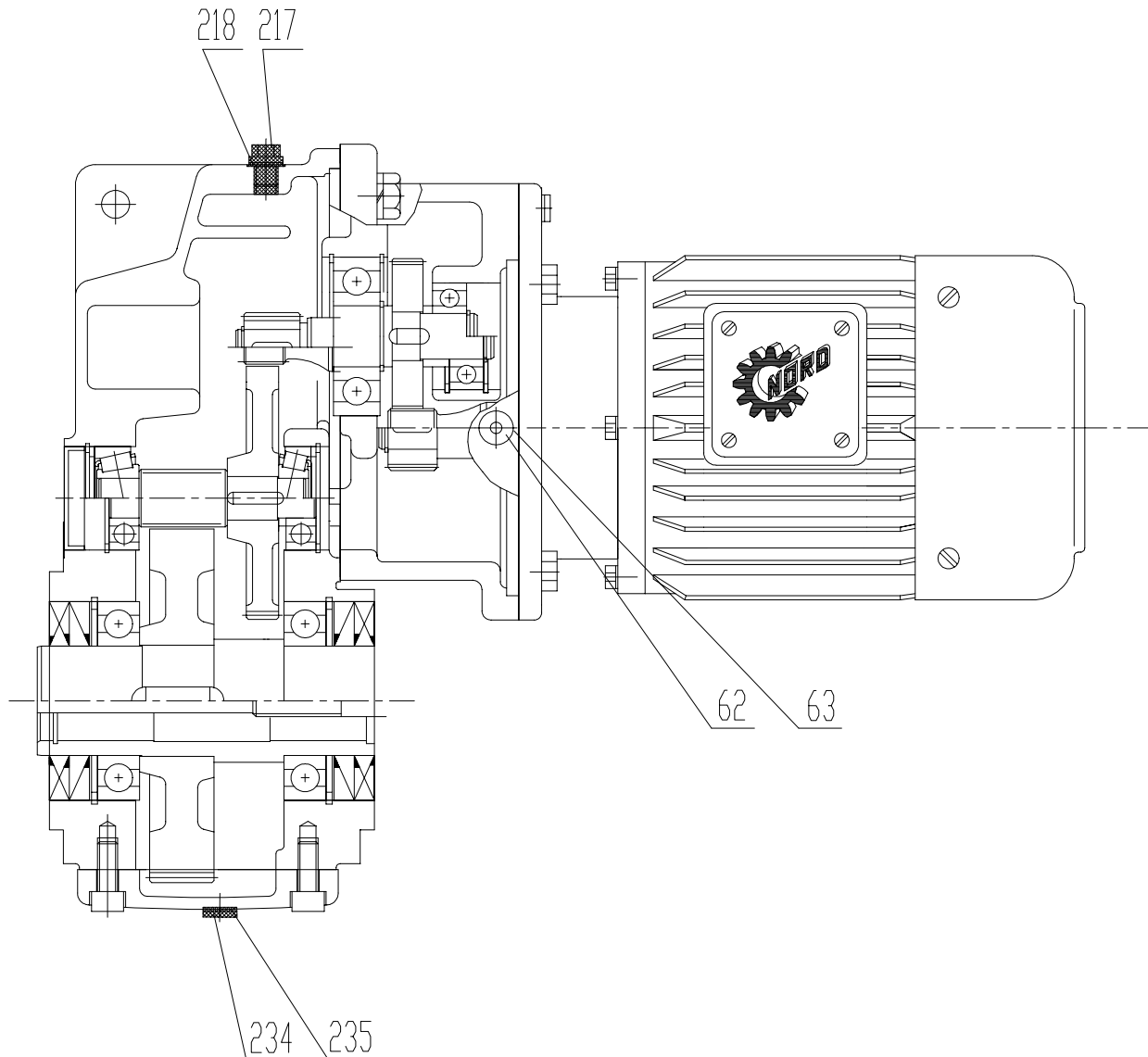
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STEP 1



Drain oil. Remove drain plug (62, 234), seal (63, 235), and vent plug (217, 218).

Note: The drain plug and vent plug may be at different locations on the housing for different mounting positions.



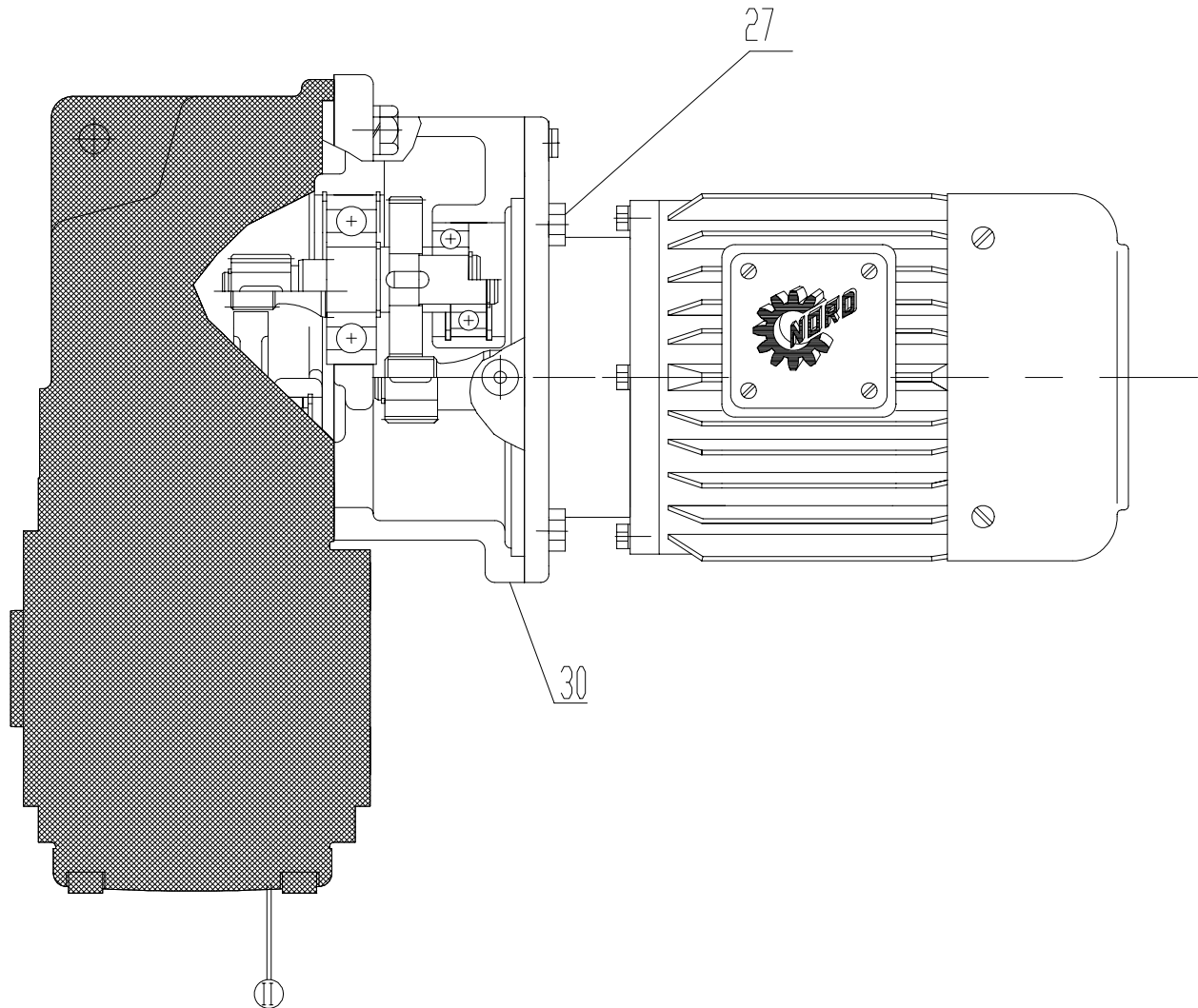
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STEP 2



Remove third stage reduction case (30) from main gearcase (II) by removing bolts (27).



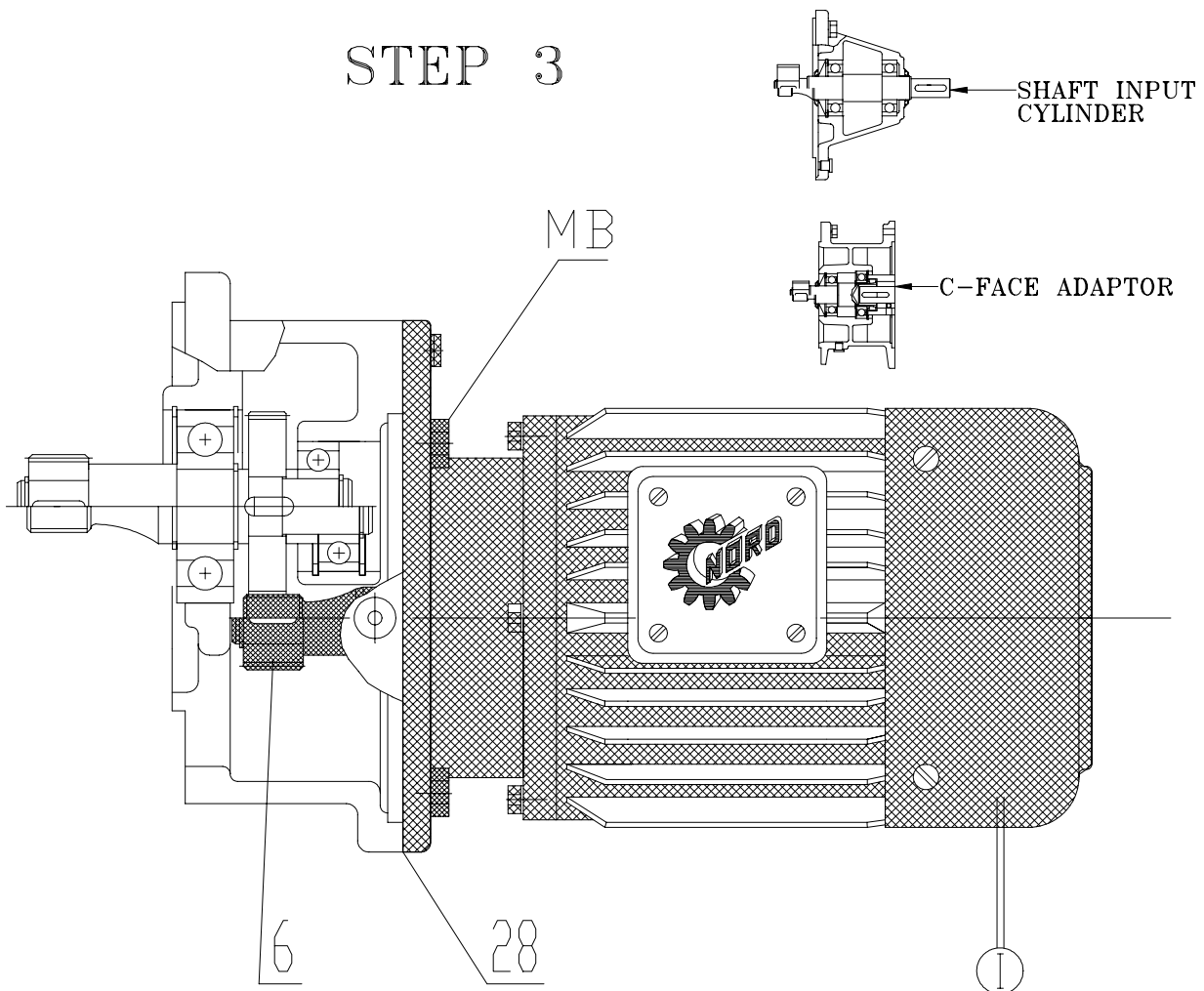
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STEP 3



Remove motor (I) by loosening bolts labeled MB. Remove driving pinion (6) with a puller if applicable. Gasket (28) must be replaced. Note: This procedure also applies to NEMA C-face adaptors and shaft input cylinders.



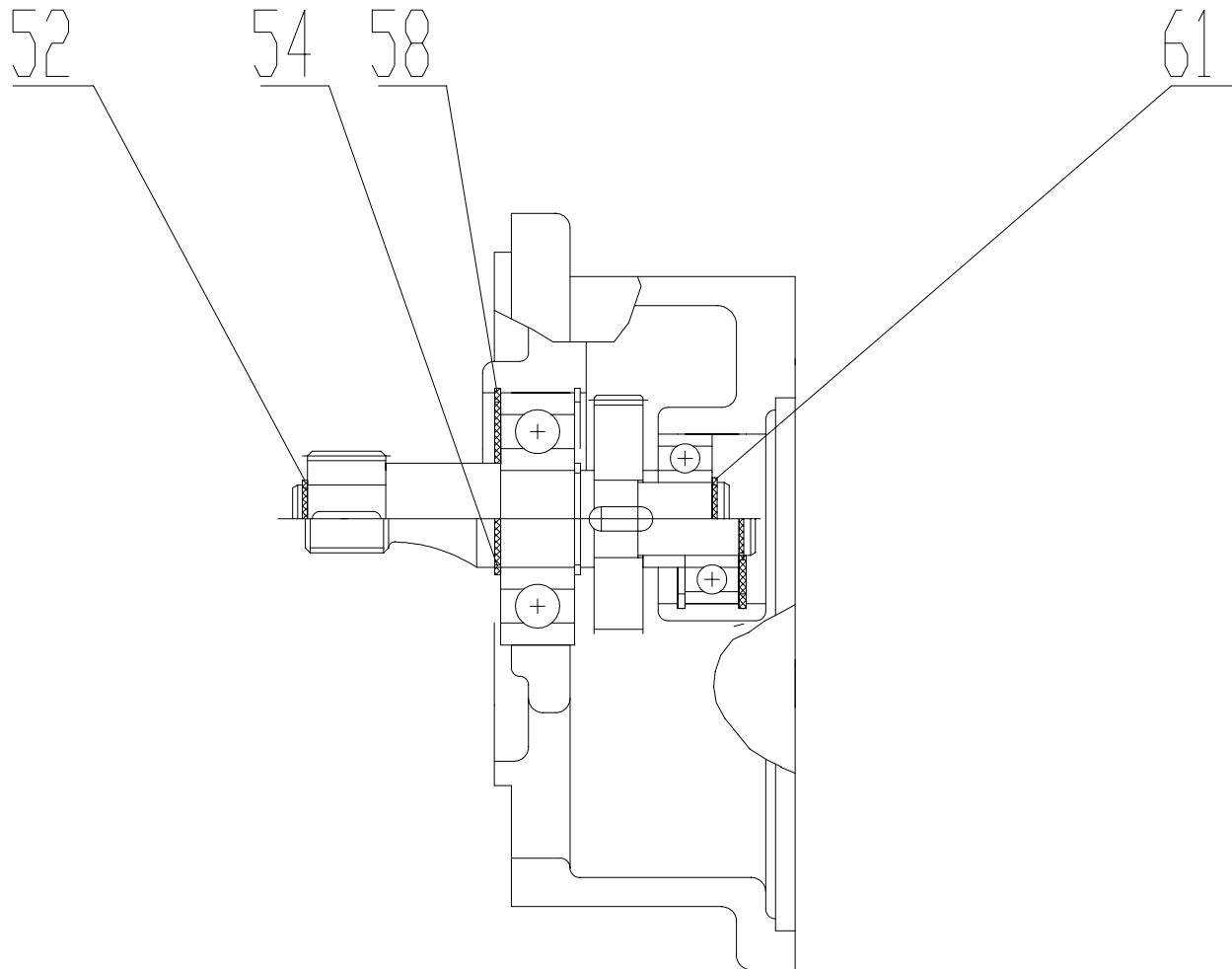
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STEP 4



Remove all shims and circlips (52, 54, 58, 61).



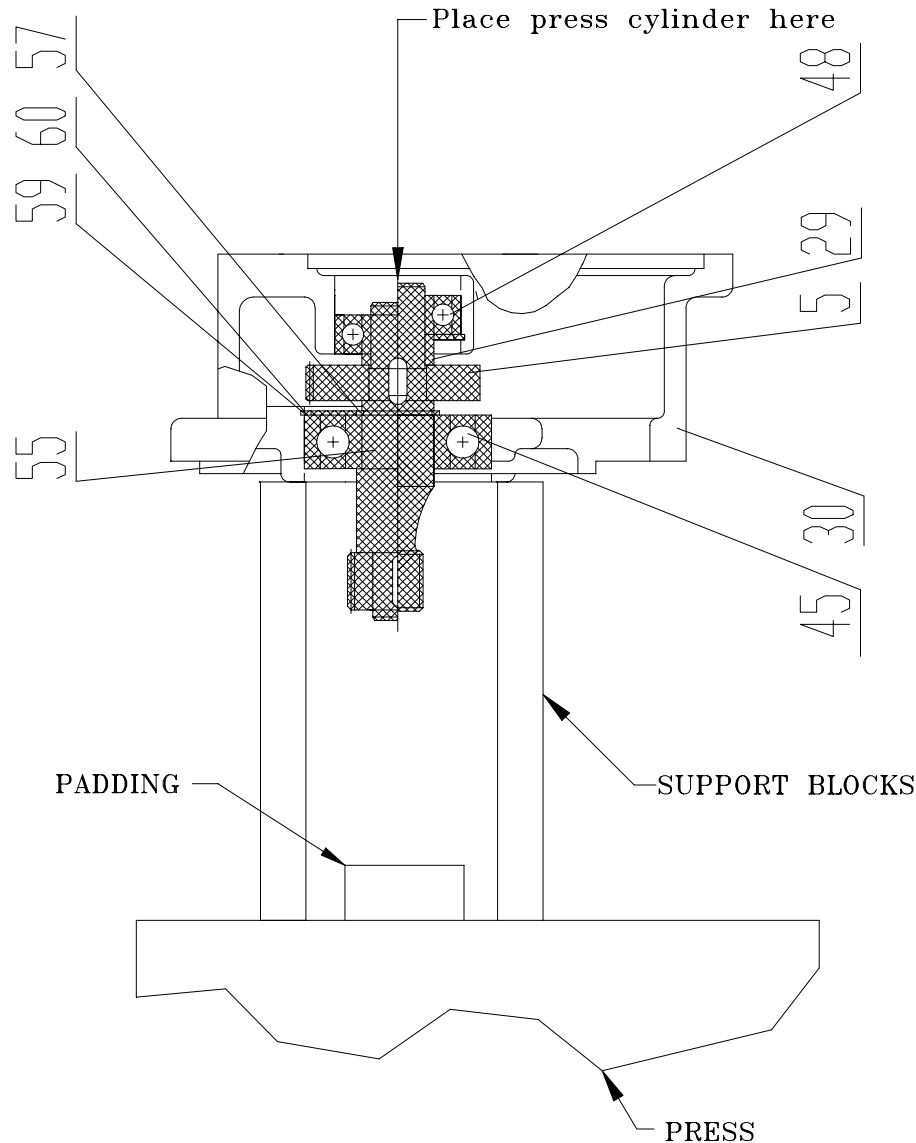
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STEP 5



Support gearcase (30) in a press with intermediate shaft (55) facing down. Gearcase (30) should be supported by blocks to allow the shaft and bearing assembly move out of the gearcase without restriction. Place a block of wood or soft material on the press, beneath shaft (55), to prevent damage when it drops out of gearcase (30).



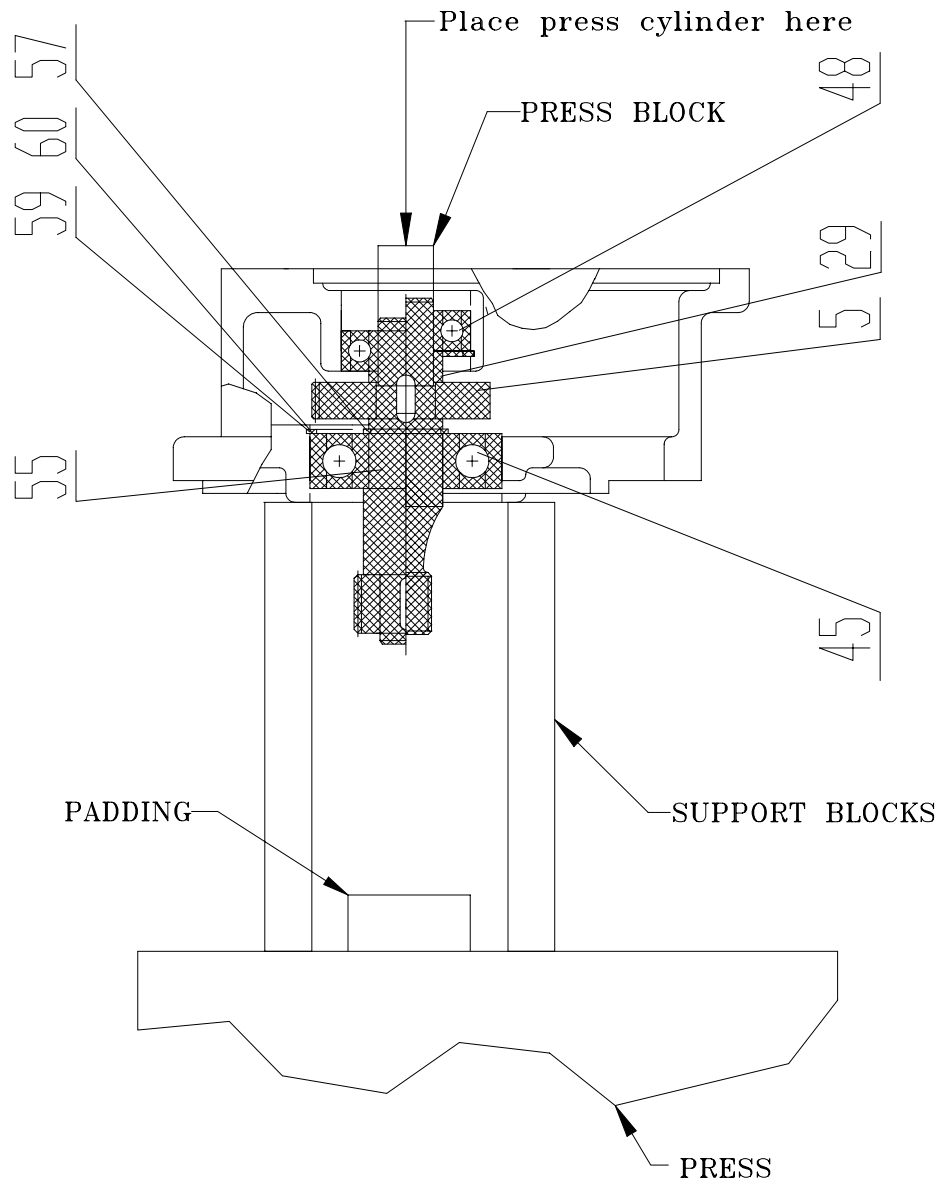
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STEP 6



Press intermediate shaft (55) until bearing (48) and driving gear (5) is free. Ensure that pressure is applied to shaft (55) only. Use a block smaller than the shaft diameter if necessary. Retract the cylinder and remove bearing (48), spacer (29), gear (5), and circlip (57 or 60).



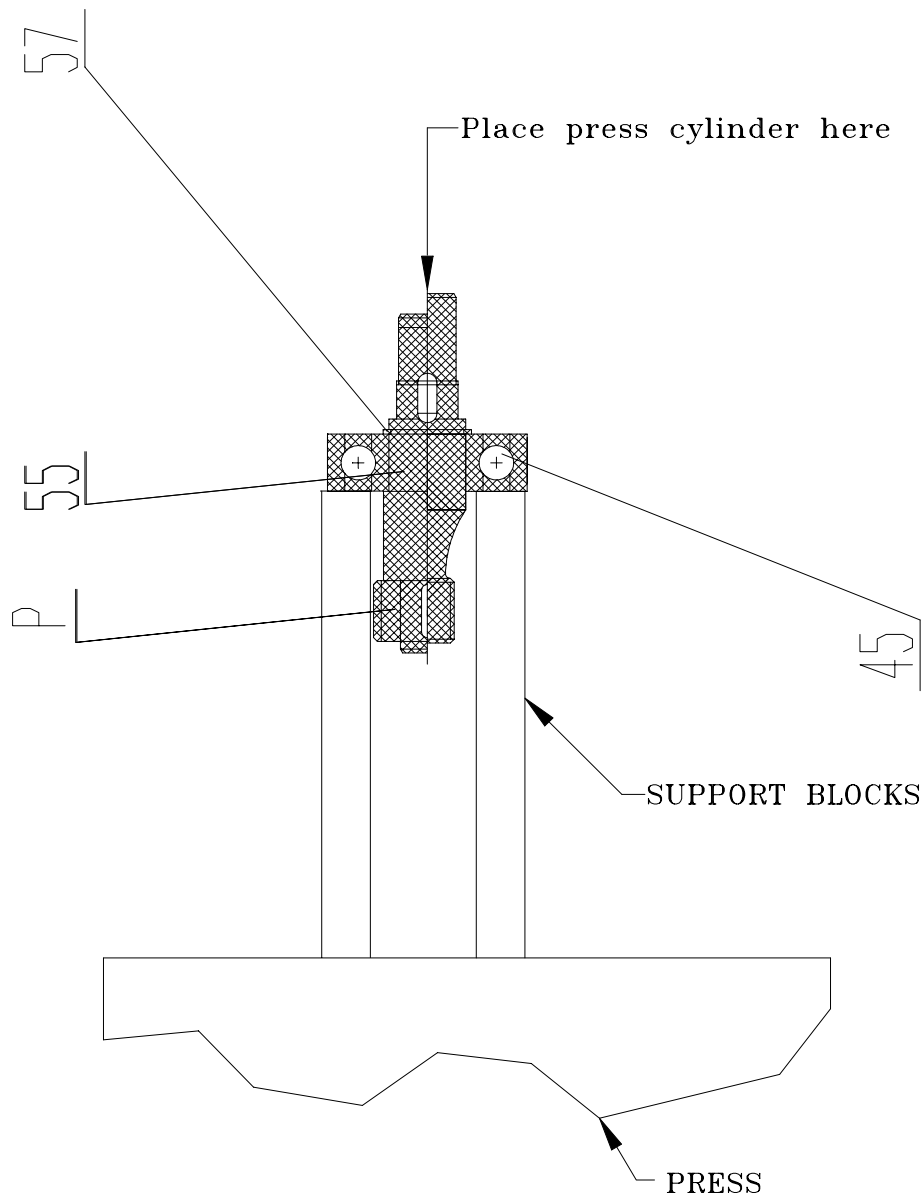
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STEP 7



Remove circlip (57). Press intermediate shaft (55) from bearing (45) by supporting the bearing by the inner race. Remove pinion P if applicable.



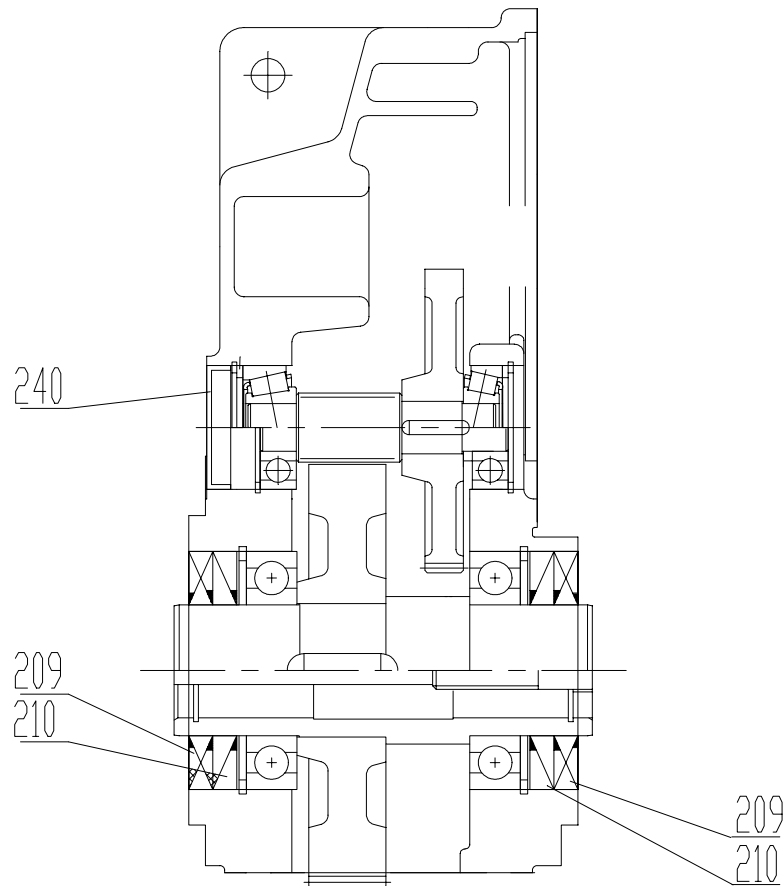
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STEP 8



Remove seals (209), (210), and locking cap (240). Puncture the seal/cap with a punch on an angle to prevent damage to the bearing, shaft and housing. Pry to remove. Seals and caps must be replaced.



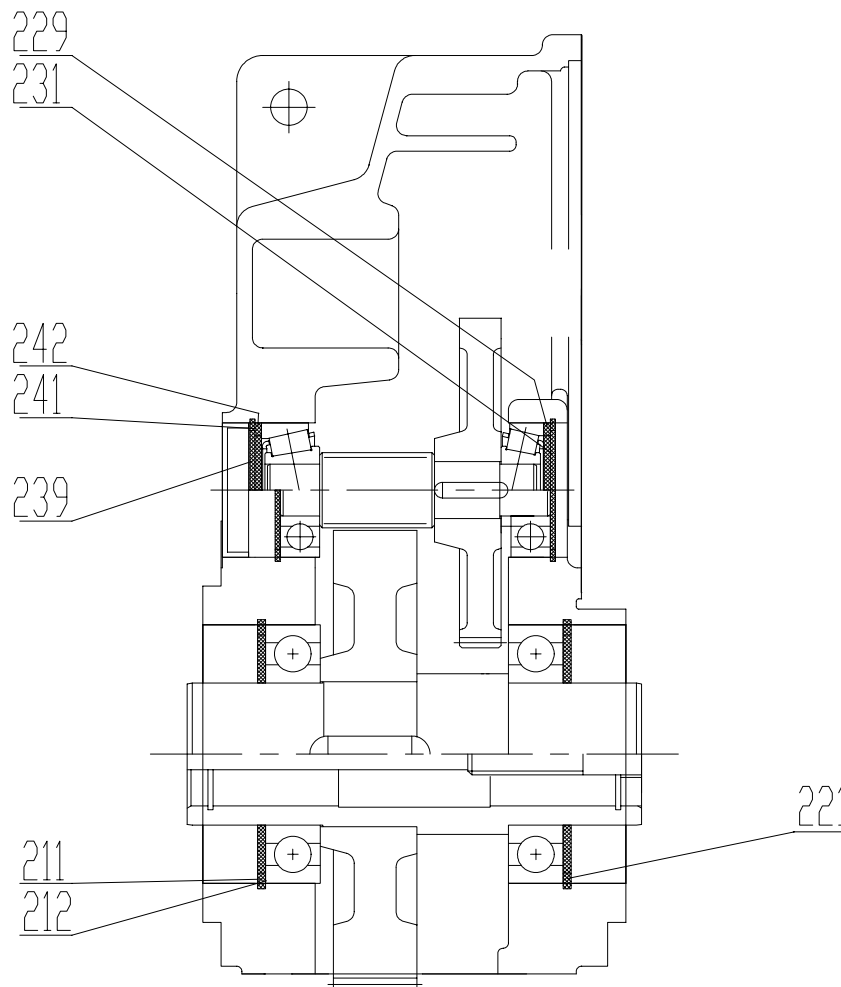
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STEP 9



Remove all shims and circlips (Items 211, 212, 221, 229, 231, 239, 241, 242).



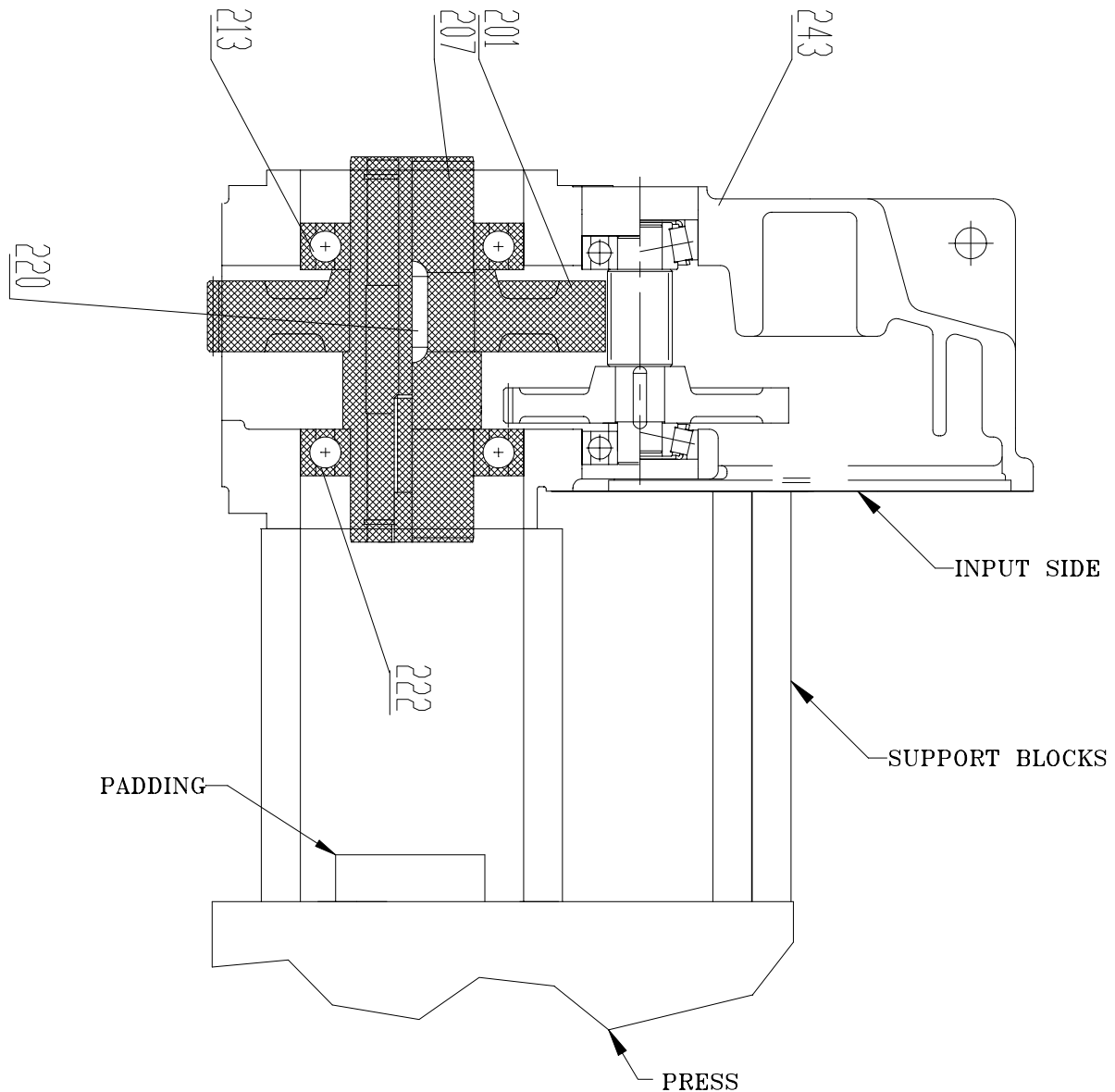
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STEP 10



Support gearbox housing (243) in a press with the input side facing down. Housing (243) should be supported by blocks to allow output shaft and bearing assembly (207, 220, 222) move out of the housing from the bottom without restriction. Output shaft (207) should be in direct alignment with the press cylinder. Place a block of wood or soft material on the press, beneath the shaft, to prevent damage when it drops out of the housing.



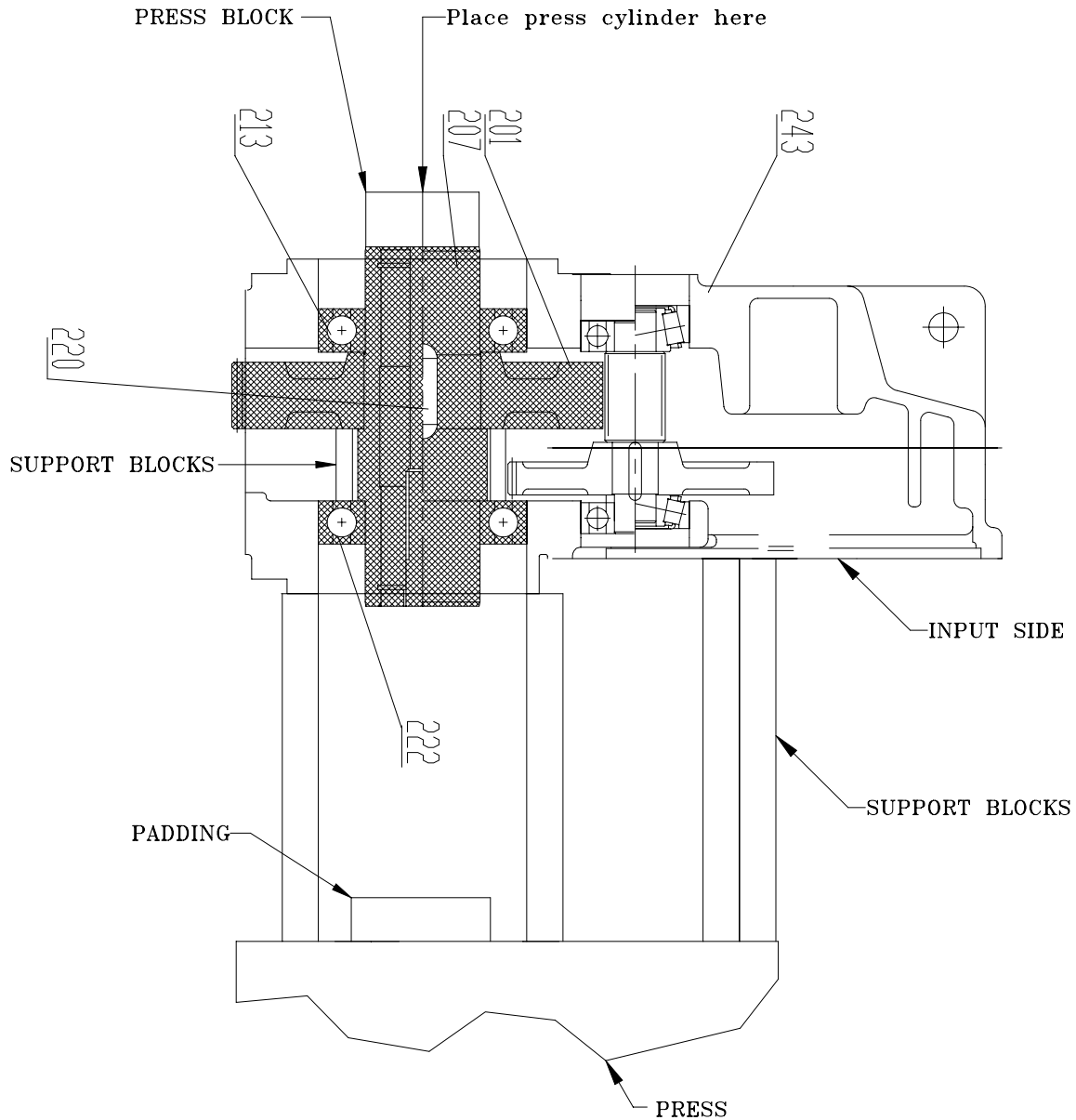
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STEP 11



Place support blocks between housing (243) and driven gear (201) as illustrated, to ensure alignment. Press pinion shaft (207) until bearing (213) and gear (201) is free, and shaft assembly (207, 222) falls out of housing (243). Remove gear (201) and bearing (213). Note that it may be necessary to use a press block to press output shaft (207).



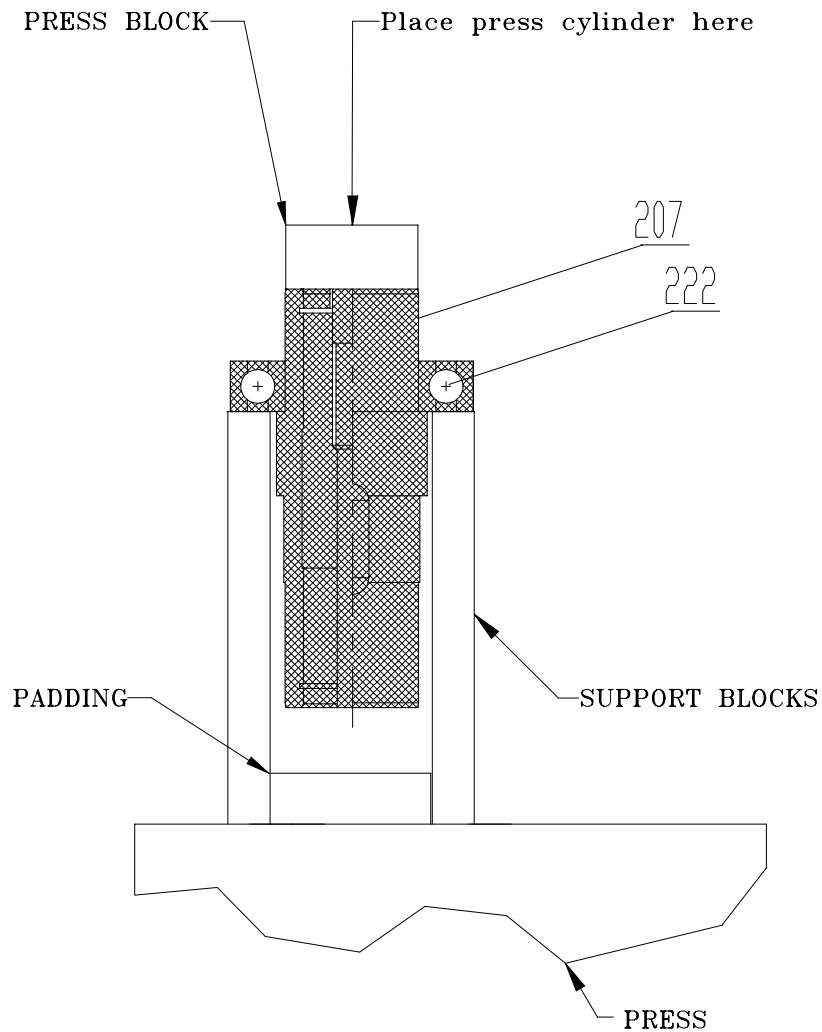
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STEP 12



Remove output shaft (207) from bearing (222) by supporting the bearing by the inner race.



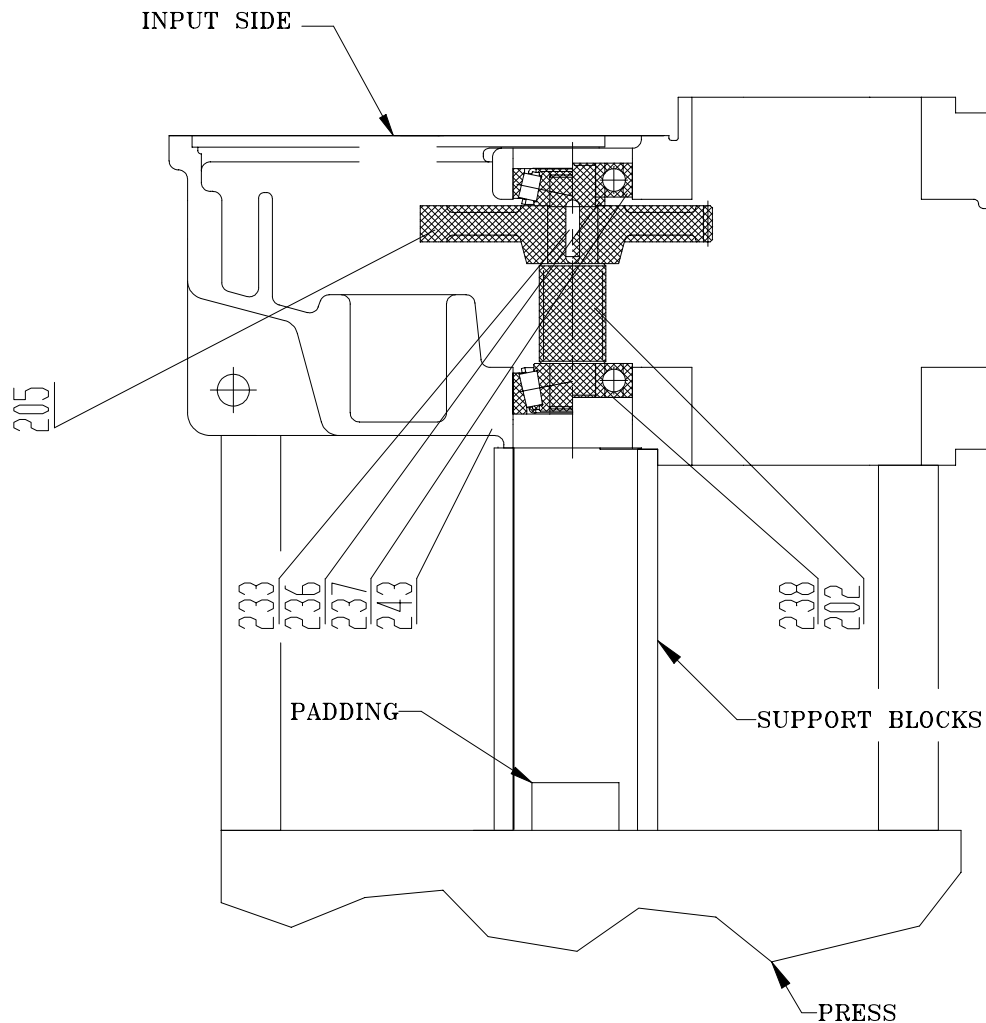
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STEP 13



Remount housing (243), with the input side facing up.
Allow clearance for pinion shaft assembly (202, 233, 238).
The shaft should be in direct alignment with the press cylinder.
Again, place a block of wood, beneath shaft (202), to prevent
damage when it drops out of housing (243).



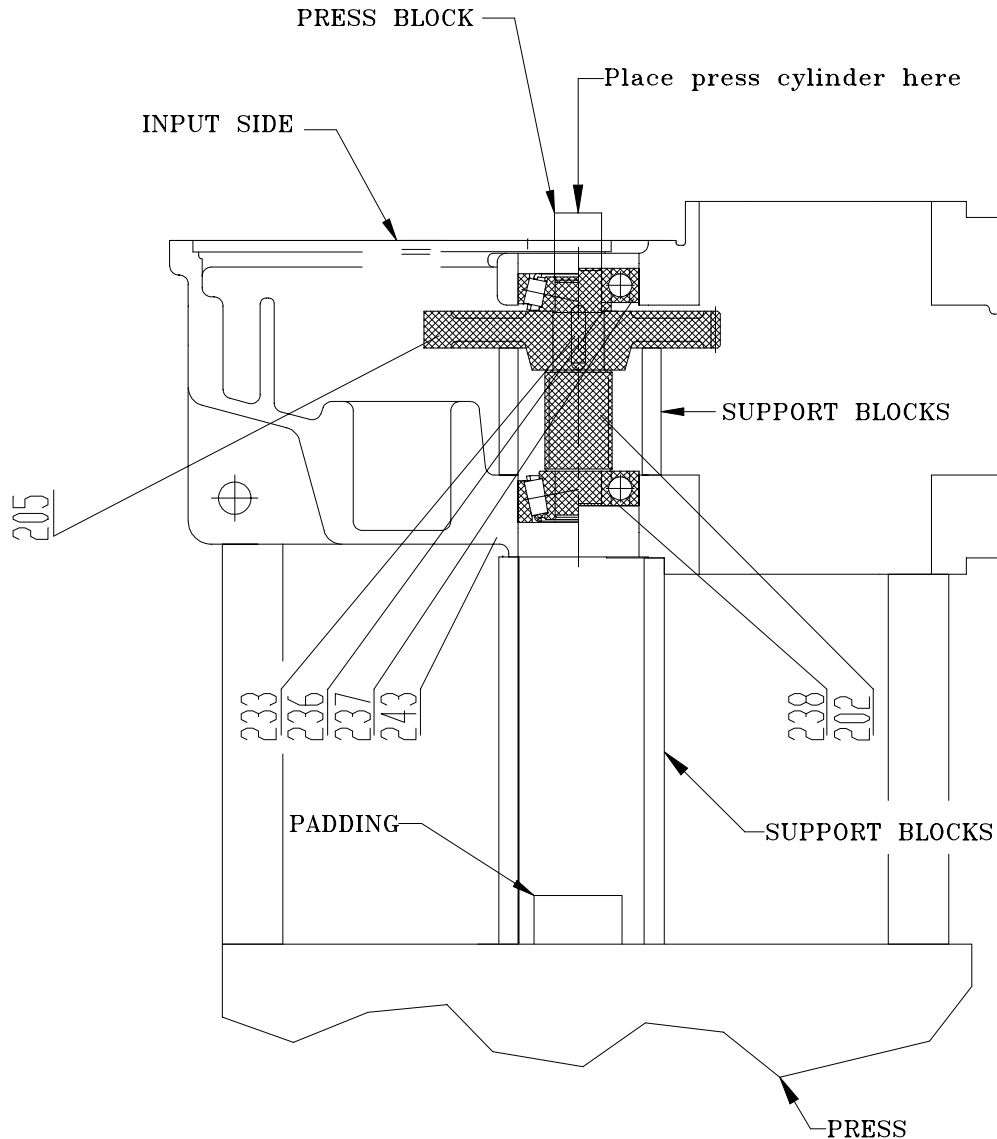
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STEP 14



Place support blocks between housing (243) and driving gear (205) to ensure alignment. Press pinion shaft (202) until bearing (237) and driving gear (205) is free, and shaft assembly (202, 233, 238) drops out of the housing. Retract the cylinder and remove bearing (237) gear (205), and supporting disc (236). Note that it may be necessary to use a press block to press pinion shaft (202).



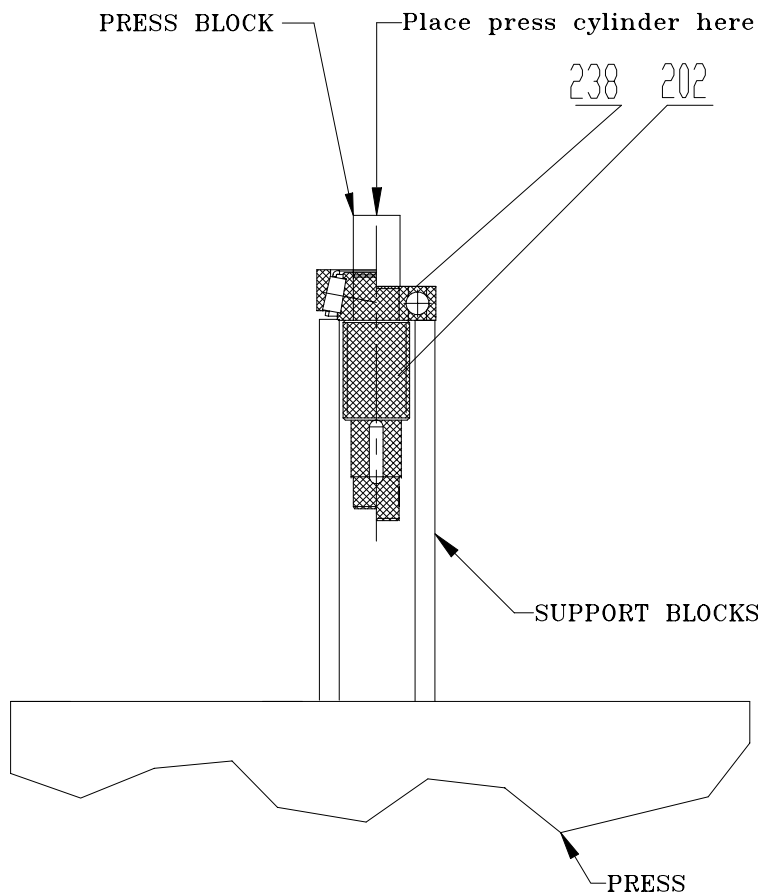
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STEP 15



Remove pinion shaft (202) from bearing (238) by supporting the bearing by the inner race.