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**FORD, CHRYSLER, PONTIAC, OLDS**  
**WINDAGE TRAY INSTALLATION INSTRUCTIONS**  
#32210 through #32245

These instructions cover both front and rear sump 289, 302, 351-W, 351-C, 429, 460 Ford, 340-360 Chrysler, Pontiac and 455 Olds. These trays are fashioned after our high-end, Big Block Chevy, competition designs which are the latest in the technology of making horsepower in the pan. Proper installation will assure the tray will make all the potential power that it is capable of.

Each tray assembly requires the correct installation stud set as listed on the tray label, check this before you start. Factory tray installation methods can not be used, as they have no allowance for adjustment. The tray install can be done with the engine in the car but it would be better if the engine was on an engine stand. All main bolt threads in the block should be cleaned up with a tap. A few engines will be noted, as requiring a bottom tap (flat nosed) to get the correct stud height, due to variations in the bolt hole depth by the factory.

**To install studs:** Remove a main bolt (main cap can be removed or left in place), tap threads, coat coarse threads with oil, screw stud in by hand, thread 2 main nuts on tray stud and lock them tightly together, lightly tighten tray stud 10-15 ft/lbs (making very sure that double nuts are not slipping or have run into the main cap), remove the 2 main nuts, coat the fine threads with oil, install the stud washer and nut, torque main stud with oil to torque spec of 65 ft/lbs for 7/16" or 85 ft/lbs for 1/2" studs, install 1 silver tray adjusting nut on the 3/8" fine thread with the serrated face towards you (away from the engine). Do all the required studs locations to mount the tray in this fashion. You are now ready to mount the tray assembly.

**To install tray:** Once all necessary tray studs have been installed properly, consult the special considerations section for the initial tray height and correct width, adjust the tray nut to this height, slide tray assembly into place and onto mounting studs, make sure that tray is supported equally by all studs (no wobble), then install the 2<sup>nd</sup> silver tray nut with the serrations toward the tray and torque with oil to 35 ft/lbs. Rotate engine carefully by hand to check for the correct clearance between the rod nuts and tray louvers. There should be a minimum of 1/8" from tray to any part of the rotating assembly. ANY rod or crank to tray contact will void any and all warranty. Adjust to the necessary clearance by loosening the top tray adjusting nut, rotate the lower nuts to raise or lower, then re-torque the upper nut correctly, recheck clearances. The oil pump, pickup and pump drive shaft can be removed to ease tray installation but is not a necessity, re-install after tray work is completed. Rear sump Ford applications must have the pump and pickup in place during installation.

On Ford rear sump applications, there may be some interference with the #4 main pickup support bracket on some older Milodon pickups or pickups of other than Milodon manufacture. Re-bend bracket as necessary but the rear support bracket must still be used and properly attached.

***Special Considerations:***

289-302 Ford – Initial install height from pan rail to lower tray adjusting nut – 3 1/8", tray width nearest block – 8", uses a 4.950" long tray stud. Front sump mounts on #2 and 3 main caps. Rear sump mounts on #2 and 4 main caps.

351-W Ford – Initial install height from pan rail to lower tray adjusting nut – 3 5/8", tray width nearest block – 8 1/4", uses a 5 1/2" long tray stud. Front sump mounts on #2 and 3 main caps. Rear sump mounts on #2 and 4 main caps.

351-C Ford – Initial install height from pan rail to lower tray adjusting nut – 3 7/8", tray width nearest block – 8 1/2", uses a 6" long tray stud. Front sump mounts on #2 and 3 main caps. Rear sump mounts on #2 and 4 main caps. Main stud threads in block must be bottom tapped for proper pan to stud clearance. Maximum installed stud height from pan rail to stud top must be 4 1/2".

429-460 Ford – Initial install height from pan rail to lower tray adjusting nut – 4" tray width nearest block – 8 1/4", uses a 6 1/4" long tray stud. Front sump mounts on #2 and 3 main caps. Rear sump mounts on #2 and 4 main caps. In rear sump application only, main stud threads in block must be bottom tapped for proper pan to stud clearance. Rear sump maximum installed stud height from pan rail to stud top must be 4 1/2". On all engines using high volume pumps that have a tang on the oil pressure relief boss that interferes with the tray, you must cut this tang off to make pressure relief boss more or less round in shape.

318, 340, 360 Chrysler – Initial install height from pan rail to lower tray adjusting nut – 4", tray width nearest block – 8 1/4", uses a 6" long tray stud. Mounts on #3 and 4 main caps.

Pontiac (All engines) – Initial install height from pan rail to lower tray adjusting nut – 4", tray width nearest block – 8", uses a 6" long tray stud. Mounts on #2, 3 and 4 main caps. Stock dipstick routing tube should be retained but will need to be securely mounted.

Olds 455 – Initial install height from pan rail to lower tray adjusting nut – 4", tray width nearest block – 8 1/2", uses a 5 3/4" long tray stud. Mounts on #3 and 4 main caps. Main stud threads in block must be bottom tapped for proper pan to stud clearance, installed maximum stud height from pan rail to stud top must be 4 1/2".