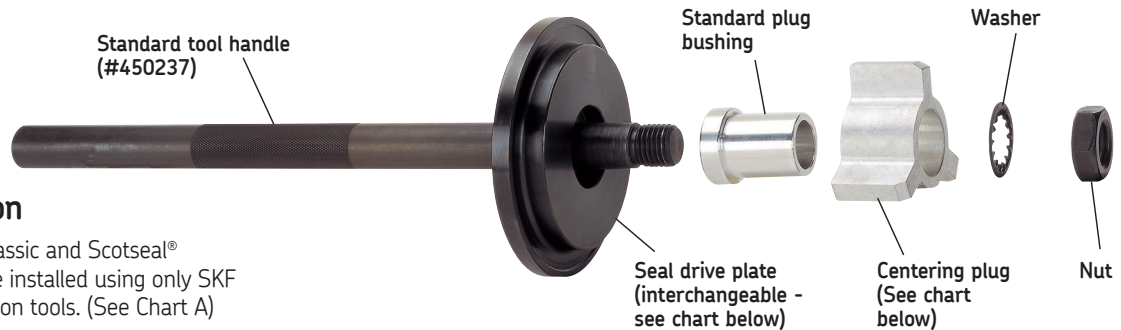




# Scotseal® installation tooling guide



## Tool selection

SKF Scotseal® Classic and Scotseal® Longlife are to be installed using only SKF Scotseal installation tools. (See Chart A)

## Centering the seal

Precisely matched centering plugs are engineered to fit within the inside diameter of the inner bearing cone and allow accurate centering of the Scotseal in the bore of the hub, as well as preventing cocking of the seal. Chart B below provides correct matchup of bearing cone and centering plug.

| Chart A<br>Drive plates & seal matchups                   |       |       |                |
|---|-------|-------|----------------|
| (Drive plates in bold numbers with matching seal numbers) |       |       |                |
| 427   | 441   | 451   | 463            |
| 34387   | 40086 | 46305 | 27438          |
| 36274   | 40090 | 46306 | 28758          |
| 36285   |       | 46308 | 28820          |
| 36358   | 445   |       | 28832          |
| 36365   | 39380 | 452   |                |
|   | 39420 | 42623 | 465            |
| 428   | 39425 | 42624 | 43752          |
| 31175   | 42550 | 42630 | 43764          |
| 31244   | 42672 | 42631 | 43765          |
| 31264   | 42800 |       | 43800          |
| 31266   |       | 453   |                |
| 31281   | 446   | 50190 | 472            |
| 31307   | 43860 | 52660 | 39380          |
| 32470   | 43865 | 52664 | (w/disc brks.) |
|   | 43875 |       |                |
| 435   | 46390 | 457   |                |
| 47690   | 47483 | 40040 | 474            |
| 47693   | 48297 | 40136 | 52658          |
| 47696   | 48298 | 40139 |                |
| 47697   | 48690 | 40146 | 484            |
| 47698   | 48792 | 40147 | 44922          |
| 48000   | 48794 |       | 44964          |
|   | 48796 | 461   | 45010          |
| 436   | 48884 | 45152 | 45099          |
| 34975   | 50124 | 45160 | 45100          |
| 35000   |       | 45162 | 45103          |
| 35001   | 448   | 45163 | 45108          |
| 35060   | 38709 |       |                |
| 35066   | 39988 | 462   | 450737         |
| 35072   | 39990 | 38747 | 42625          |
| 35075   |       | 38750 |                |
| 35102   | 449   | 38780 |                |
| 35103   | 47686 | 38782 |                |
|   |       | 38783 |                |

| Chart B<br>Matchup of bearing cones & centering plugs |                    |                  |                    |
|---|--------------------|------------------|--------------------|
| Bearing cone no.                                      | Centering plug no. | Bearing cone no. | Centering plug no. |
| 495AX   | 708                | 5760             | 708                |
| 497   | 711                | 6379             | 705                |
| 539   | 701                | 6386             | 706                |
| 555S  | 702                | 6386A            | 706                |
| 557A  | 703                | 6389             | 706                |
| 559   | 704                | 6461             | 708                |
| 560   | 706                | 6461A            | 708                |
| 567   | 707                | 6559             | 710                |
| 568   | 731                | 6580             | 712                |
| 575   | 708                | 28995            | 703                |
| 580   | 710                | 33281            | 716                |
| 582   | 710                | 33287            | 707                |
| 593   | 712                | 33895            | 701                |
| 594   | 715                | 39578            | 701                |
| 594A  | 715                | 39580            | 702                |
| 595   | 710                | 39581            | 702                |
| 596   | 711                | 39585            | 704                |
| 598   | 714                | 42688            | 708                |
| 598A  | 714                | 45284            | 700                |
| 639   | 704                | 45285            | 700                |
| 641   | 706                | 47678            | 708                |
| 659   | 708                | 47685            | 710                |
| 663   | 710                | 47686            | 710                |
| 663A  | 710                | 47687            | 710                |
| 664   | 732                | 52400            | 718                |
| 665   | 711                | 52401            | 718                |
| 665A  | 711                | JH217249         | 719                |
| 681A  | 714                | JM205149 A       | 722                |
| 683   | 715                | JM207049 A       | 723                |
| 687   | 718                | JM511946         | 724                |
| 749   | 719                | JM716649         | 719                |
| 749A  | 710                | JM718149         | 713                |
| 749S  | 719                | JM719149         | 733                |
| 756A  | 709                | HM212044         | 703                |
| 758   | 711                | HM212046         | 704                |
| 759   | 712                | HM212047         | 704                |
| 760   | 717                | HM212049 X       | 706                |
| 776   | 715                | HM212049         | 706                |
| 780   | 718                | HM215249         | 707                |
| 3778  | 730                | HM218248         | 713                |
| 3982  | 704                | HM516449         | 710                |
| 3984  | 706                | HM518445         | 712                |
| 4595  | 701                | H715345          | 716                |
| 5557  | 721                |                  |                    |



# Wheel bearing adjustment procedure



## Manual adjustment

| Step 1: Lubricate the wheel bearing with clean axle lubricant of the same type used in the axle sump or hub assembly.<br>Note: Never use an impact wrench when tightening or loosening lug nuts or bolts during the procedure. |                  |   |                         |                  |                |   |   |                             |
|--|------------------|---|-------------------------|------------------|----------------|---|---|-----------------------------|
| Initial adjusting nut torque   | Initial back off | Final adjusting nut torque                | Back off                |                  |                | Jam nut torque                                  |   | Acceptable end play         |
|  |                  |   | Axle type               | Threads per inch | Final back off | Nut size  | Torque Specifications                         |                             |
| Step 2   | Step 3           | Step 4                                    |                         | Step 5           | Step 6         | Step 7  |   | Step 8                      |
| 200 lb•ft (271N•m)<br>While rotating wheels  | One full turn    | 50 lb•ft (68N•m)<br>While rotating wheels | Steer (front) non-drive | 12               | 1/6 Turn *     | Install cotter pin to lock axle nut in position |   | .001"-.005" (.025mm-.127mm) |
|  |                  |   |                         | 18               | 1/4 Turn *     |   |   |                             |
|  |                  |   |                         | 14               | 1/2 Turn       | Less than 2 5/8" (66.7mm)                       | 200-300 lb•ft (271-407 N•m)                   |                             |
|  |                  |   |                         | 18               |                |   |   |                             |
|  |                  |   | Drive                   | 12               | 1/4 Turn       | Dowel type washer                               | 300-400 lb•ft (407-542 N•m)                   |                             |
|  |                  |   |                         | 16               |                | Tang type washer**                              | 200-275 lb•ft (271-373 N•m)                   |                             |
|  |                  |   | Trailer                 | 12               | 1/4 Turn       | 2 5/8" (66.7mm) and over                        | 300-400 lb•ft (407-542 N•m)                   |                             |
|  |                  |   |                         | 16               |                |   |   |                             |
|  |                  |   |                         |                  |                |   | As measured per procedure with dial indicator |                             |

\* If dowel pin and washer (or washer tang and nut flat) are not aligned, remove the washer, turn it over, and reinstall. If required, loosen the inner (adjusting) nut just enough for alignment.  
 \*\* Bendable type washer lock only: Secure nuts by bending one wheel nut washer tang over the inner and outer nut. Bend the tangs over the closest flat perpendicular to the hang.  
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## PreSet wheel bearing adjustment procedure

ConMet PreSet hub assemblies are equipped with specially, half-toleranced bearings and a spacer, and require a specific bearing adjustment procedure. Use the OEM seal, Scotseal PlusXL, when servicing a PreSet hub assembly.

- 1) Lubricate the wheel bearing with clean axle lubricant of the same type used in the axle sump or hub assembly. Never use an impact wrench when tightening or loosening lug nuts or bolts during this procedure.
- 2a) For one-piece spindle nut systems, torque the nut to a minimum of 250 ft. lbs. **Do not back off the spindle nut.** Advance the nut until engagement takes place and the nut is locked.
- 2b) For a double nut or jam nut system, torque the inner nut to 300 ft. lbs. **Do not back off the spindle nut.** Install the outer nut with 200 ft. lbs. of torque.
- 2c) Per ConMet Service Manual, rev C, 1-2008, ConMet does not recommend the use of a one-piece castellated type nut system for use with PreSet hubs.

**Note: Be sure to engage any locking device.**

## End play verification procedure

Wheel bearing end play is the free movement of the wheel assembly along the spindle axis. It is recommended, for verification purposes, that wheel bearing end play be measured with a dial indicator.

- Step 1** Make sure the brake drum to hub fasteners are tightened to the manufacturers' specifications.
  - Step 2** Attach a dial indicator with its magnetic base at the bottom of the hub or brake drum.
  - Step 3** Adjust the dial indicator so that its plunger or pointer is against the end of the spindle with its line of action approximately parallel to the axis of the spindle.
  - Step 4** Set the dial indicator to zero by rotating the gauge face so the zero mark lines up with the gauge needle. For digital indicators, push the zero-out button.
  - Step 5** Grasp the wheel assembly at the 3 o'clock and 9 o'clock positions, while oscillating it to seat the bearings. Read bearing end play as the total indicator movement.
- Note:** If end play is not within specifications, repeat wheel bearing adjustment procedure until end play is within proper range.

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