

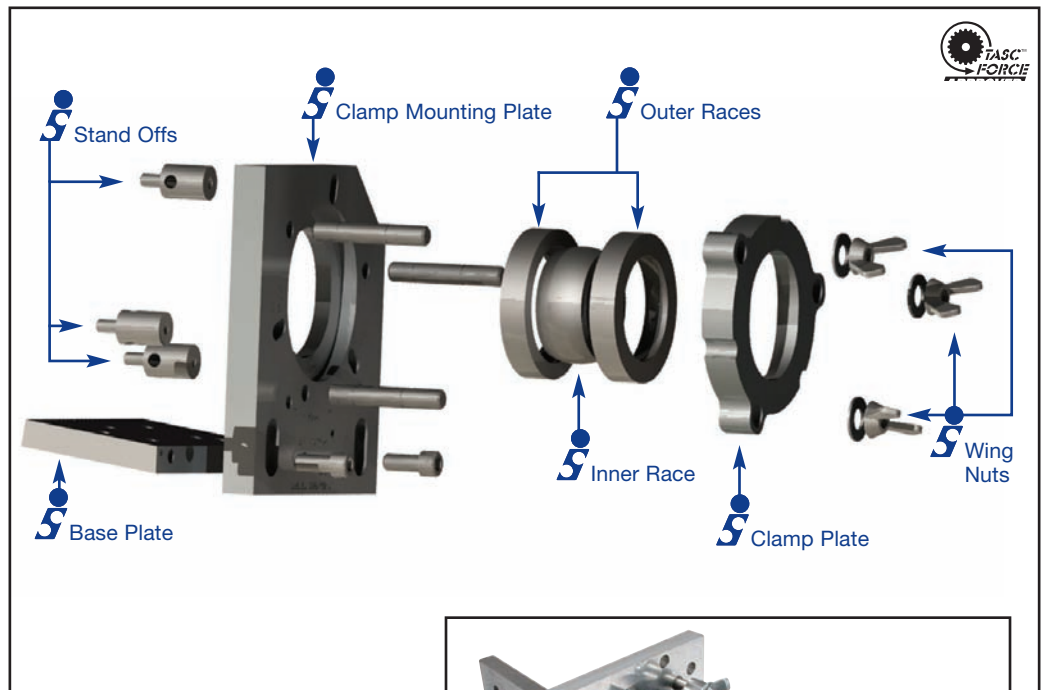
SERVO-FIX

- 1 Base Plate
- 1 Clamp Mounting Plate
- 1 Clamp Plate
- 2 Outer Races
- 1 Inner Race
- 3 Studs
- 3 Washers
- 3 Wing Nuts
- 1 Hardware Mounting Kit

Patent Pending



Sonnax has designed special tool kits to service a specific servo pin bore, and they must be used in conjunction with the Servo Pin Bore Reaming Fixture, **SERVO-FIX**. Part numbers for these specially designed tool kits begin with an "S" to distinguish them from both the F-series tools that work with the **VB-FIX**, and the traditional Sonnax tool kits that can be used as standalone tools.



MOUNTING INSTRUCTIONS

SERVO-FIX Servo Pin Bore Reaming Fixture Assembly
5R55N/S/W
AOD & E, 4R70W, 4R75W
4L30-E, 180
AXOD & E, AX4S & N, 4F50N

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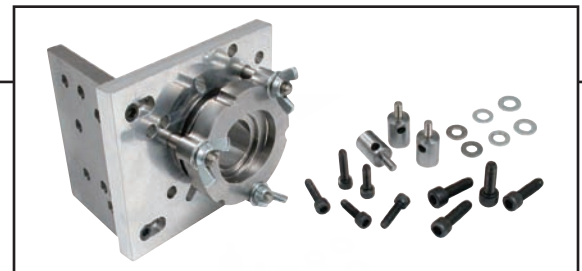


Figure 1

SERVO-FIX ASSEMBLY INSTRUCTIONS

1. Install the three threaded studs into the clamp mounting plate.

NOTE: Tighten two 3/8-16 nuts (not included) as jam-nuts (see Figure 1) onto the longer threaded end of the stud to help with stud installation. Remove nuts when done. Verify clamp plate slides easily over studs before proceeding.

2. Coat inner race and two outer races with a thin film of lightweight grease and assemble into the pocket of the clamp mounting plate. Use the exploded view as a guide.
3. Install the clamp plate, washers and wing nuts.

The **SERVO-FIX** clamp plate is designed to bolt to a variety of cases, and the plate is clearly marked as to which holes to use to repair servo pin bores in multiple applications. If working on a **5R55N/W/S**, two bore locations are identified: One for the overdrive location, the other for the intermediate. Locations are also marked for the **AOD & E**, **AXODE**, **AX4N**, and **4L30-E, 180**.



Clamp Mounting Plate with locations

5R55N/W/S Mounting Instructions

S-56361J-TL

- 1 Drill
- 1 Roughing Reamer
- 1 Finishing Reamer
- 1 Guide Pin
- 1 Reamer Guide
- 1 Installation Handle
- 1 Pilot
- 2 O-Rings
- 1 Flex Hone

Tool kit used in conjunction with:

56361J-01K

Overdrive & Intermediate
Servo Pin Bore Sleeve Kit

Hole Locations

Verify fit of alignment pin prior to mounting SERVO-FIX

Check the fit of the guide pin (labeled **5R55 Servo Guide Pin**) in the intermediate and overdrive servo pin bores. The guide pin should be snug but slide in and out of the bore without excessive resistance. Remove any ridges inside the bore using the supplied flex hone and a drill.

Mount SERVO-FIX to case

1. Assemble the base plate to the clamp plate as shown in Figure 2. Holes in the clamp mounting plate are labeled for **CD4E/5R55N/S/W-OD** for front (OD) servo and **5R55N/S/W-INT** for intermediate servo.
2. Mount the **SERVO-FIX** at the hole locations identified on the base plate and case (see Figure 1) using screws from the hardware kit. Tighten fixture securely in place.
3. Install the reamer guide (labeled **Servo Pin Bore**) into the inner race of the servo fixture. Install the guide pin (labeled **5R55 Servo Guide Pin**) through the reamer guide and into the servo pin bore (see Figure 3). Pin should slide smoothly with no binding.
4. Lightly tighten and sequentially snug down all three wing nuts while verifying pin is not bound up. Wiggling the guide pin may also be necessary during this process to keep the guide pin moving freely. Do not use pliers or tools to tighten the wing nuts. Do not over-tighten wing nuts as this will cause misalignment.
5. Recheck to verify alignment pin slides in and out of bore. If pin does not slide freely, loosen wing nuts and retighten.

Note: Refer to the instructions for **56361J-01K** and **S-56361J-TL** for complete reaming and installation procedures.

AOD & E, 4R70W, 4R75W Mounting Instructions

S-76890-TL24

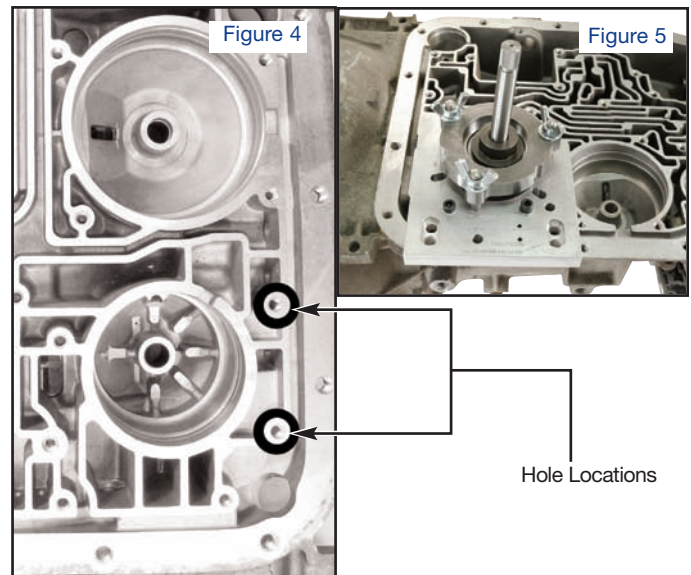
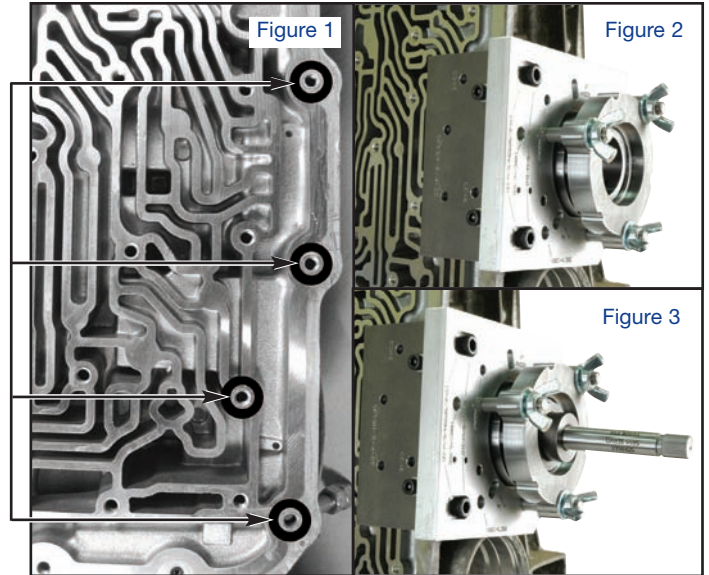
- 1 Drill
- 1 Roughing Reamer
- 1 Finishing Reamer
- 1 Guide Pin
- 1 Reamer Guide
- 1 Installation Handle
- 1 Pilot

Tool kit used in conjunction with:

76890-24K

Servo Pin Bore Sleeve Kit

Hole Locations



Verify fit of alignment pin prior to mounting **SERVO-FIX**

Check the fit of the guide pin (labeled **AOD/E**, **4L30E**, **180**) in the overdrive servo pin bore. The guide pin should be snug, but slide in and out of the bore without excessive resistance.

Mount **SERVO-FIX** to case

NOTE: The base plate is not used with the **AOD & E**, **4R70W**, **4R75W** applications. Holes in the clamp mounting plate are labeled **AOD&E** for front (OD) servo.

1. Mount the **SERVO-FIX** at the hole locations identified on the clamp plate and case (see Figure 4), using screws from hardware kit. Tighten fixture securely in place.
2. Install the reamer guide (labeled **S-SERVO-RJ**) into the inner race of the **SERVO-FIX** (see Figure 5). Install the guide pin through the reamer guide and into the servo pin bore. The pin should slide smoothly with no binding.
3. Lightly tighten and sequentially snug down all three wing nuts while verifying pin is not bound up. Wiggling the guide pin may also be necessary during this process to keep the guide pin moving freely. Do not use pliers or tools to tighten the wing nuts. Do not over-tighten wing nuts as this will cause misalignment.
4. Recheck to verify alignment pin slides in and out of bore. If pin does not slide freely, loosen wing nuts and retighten.

Refer to the instructions for **76890-24K** and **S-76890-TL24** for complete reaming and installation procedures.

4L30-E, 180 Mounting Instructions

S-76890-TL24

- 1 Drill
- 1 Roughing Reamer
- 1 Finishing Reamer
- 1 Guide Pin
- 1 Reamer Guide
- 1 Installation Handle
- 1 Pilot

Tool kit used in conjunction with:

76890-24K

Servo Pin Bore Sleeve Kit

Verify fit of alignment pin prior to mounting **SERVO-FIX**

Check the fit of the guide pin (labeled **AOD/E**, **4L30E**, **180**) in the overdrive servo pin bore. The guide pin should be snug, but slide in and out of the bore without excessive resistance.

Mount **SERVO-FIX** to case

NOTE: The base plate is not used with the **4L30-E**, **180** applications. Holes in the clamp mounting plate are labeled **180C/4L30E**.

1. Mount the **SERVO-FIX** at the hole locations identified on the clamp plate and case (see Figure 6), using screws from hardware kit. Tighten fixture securely in place.
2. Install the reamer guide (labeled **S-SERVO-RJ**) into the inner race of the **SERVO-FIX** (see Figure 7). Install the guide pin through the reamer guide and into the servo pin bore. The pin should slide smoothly with no binding.
3. Lightly tighten and sequentially snug down all three wing nuts while verifying pin is not bound up. Wiggling the guide pin may also be necessary during this process to keep the guide pin moving freely. Do not use pliers or tools to tighten the wing nuts. Do not overtighten wing nuts as this will cause misalignment.
4. Recheck to verify alignment pin slides in and out of bore. If pin does not slide freely, loosen wing nuts and retighten.

Refer to the instructions for **76890-24K** and **S-76890-TL24** for complete reaming and installation procedures.

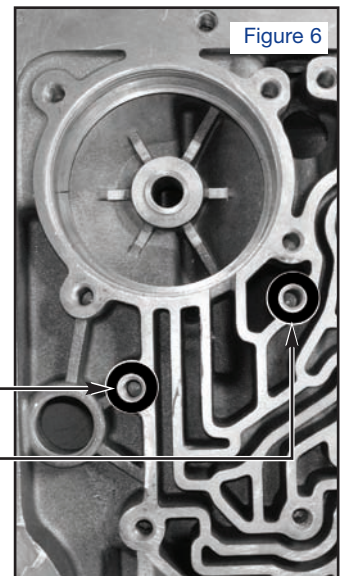


Figure 6

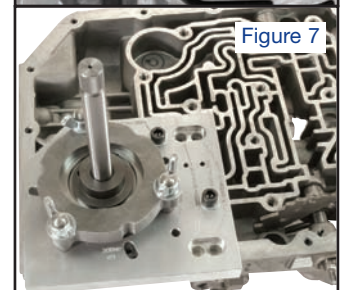


Figure 7

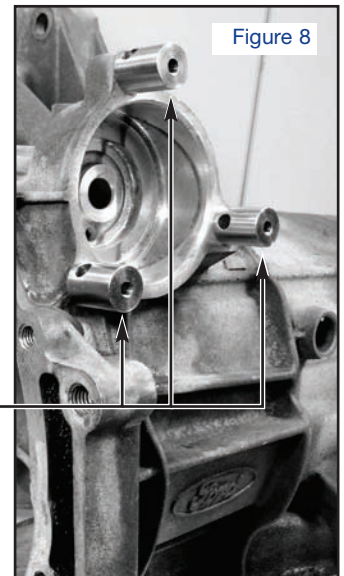
AXOD & E, AX4S & N, 4F50N Mounting Instructions

S-96872-TL

- 1 Drill
- 1 Roughing Reamer
- 1 Finishing Reamer
- 1 Guide Pin
- 1 Reamer Guide
- 1 Installation Handle
- 1 Pilot

Tool kit used in conjunction with:
96872-01K
Servo Pin Bore Sleeve Kit

Stand-offs



Verify fit of alignment pin prior to mounting SERVO-FIX

Check the fit of the guide pin (labeled **AXOD/E, AX4N/S Guide Pin**) in the overdrive servo pin bore. The guide pin should be snug, but slide in and out of the bore without excessive resistance.

Install the 3 stand-offs as shown in Figure 8.

Mount SERVO-FIX to case

NOTE: The base plate is not used with the **AXOD & E, AX4N, 4F50N** applications. Holes in the clamp mounting plate are labeled **UP-AXOD** and **UP-AX4N**.

1. Mount the **SERVO-FIX** at the three slotted hole locations nearest the clamp plate (see Figure 8). For **AXOD & E** applications, the hole labeled **UP-AXOD** must be at the top location. For **AX4N, 4F50N** applications, the hole labeled **UP-AX4N** must be at the top location. (**AXODE** shown in Figure 8 & 9.) Tighten fixture securely in place.
2. Install the reamer guide (labeled **S-SERVO-RJ**) into the inner race of the **SERVO-FIX**. Install the guide pin through the reamer guide and into the servo pin bore (see Figure 9). The pin should slide smoothly with no binding.
3. Lightly tighten and sequentially snug down all three wing nuts while verifying pin is not bound up. Wiggling the guide pin may also be necessary during this process to keep the guide pin moving freely. Do not use pliers or tools to tighten the wing nuts. Do not overtighten wing nuts as this will cause misalignment.
4. Recheck to verify alignment pin slides in and out of bore. If pin does not slide freely, loosen wing nuts and retighten.

Refer to the instructions for **96872-01K** and **S-96872-TL** for complete reaming and installation procedures.

