

SERVICE WORK INSTRUCTION

SEAKEEPER FOUNDATION BUSHING REPLACEMENT



PRODUCT SEAKEEPER 26/20HD & 35/30HD/40/M21000, M21000A & M26000

PURPOSE

To provide instructions for replacement of foundation isolation bushings, foundation clevis bushings, and clevis pins for models Seakeeper 26/20HD & 35/30HD, 40, M21000, M21000A and M26000 stabilizers.

TOOLS/SUPPLIES REQUIRED

Foundation Isolation Bushing Service Kit (P/N:10680)	Sili-Thane 803 Marine Sealant, or similar	24 mm Wrench (preferable ratcheting, but not necessary)
Black Molybdenum (black moly) Grease	Shop towels	Torque Wrench (0-150 ft-lbs)
Nickel-based anti-seize compound	Small straight-tip screwdriver	Large drift pin
Seakeeper 26 Foundation Isolation Bushing & Pin Replacement Kit (P/N 11769)	Seakeeper 35/40 Foundation Isolation Bushing & Pin Replacement Kit (P/N 11770)	Dead blow mallet



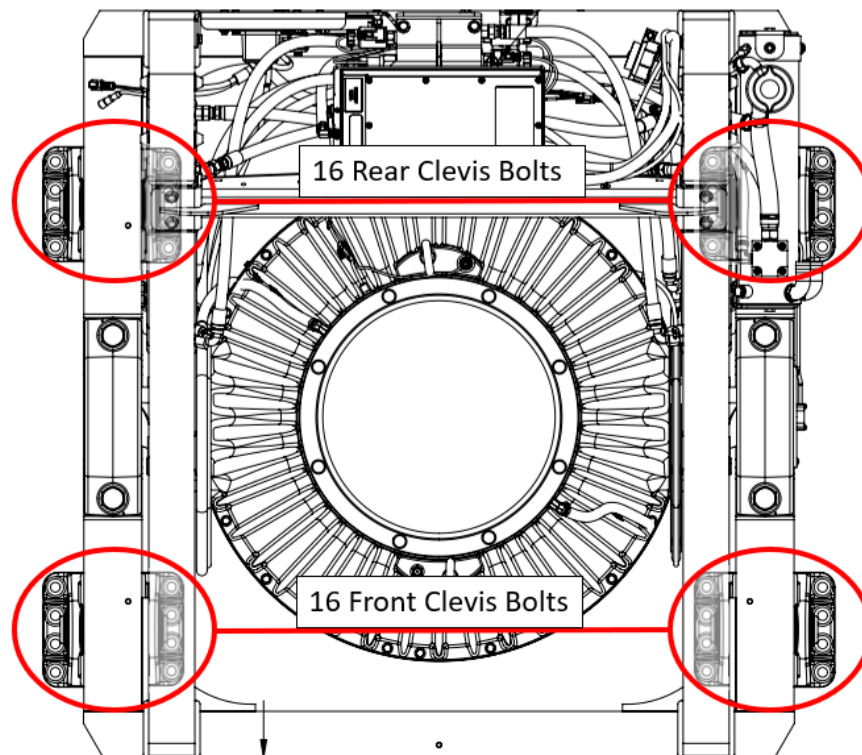
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NOTES

1. Use caution when removing foundation pin from foundation clevis; Seakeeper does not provide replacement clevis bushings. If these bushings need replacement, a replacement foundation clevis must be ordered.

PROCEDURE

1. **REMOVE** all 16 mounting screws of either front or rear end clevis assemblies to stringer/saddle with 24 mm socket.



2. **LEAVE** mounting screws of opposite end clevis assemblies installed to prevent Seakeeper movement.
3. **LIFT** Seakeeper with hydraulic spreader jack, chain fall, or crane.

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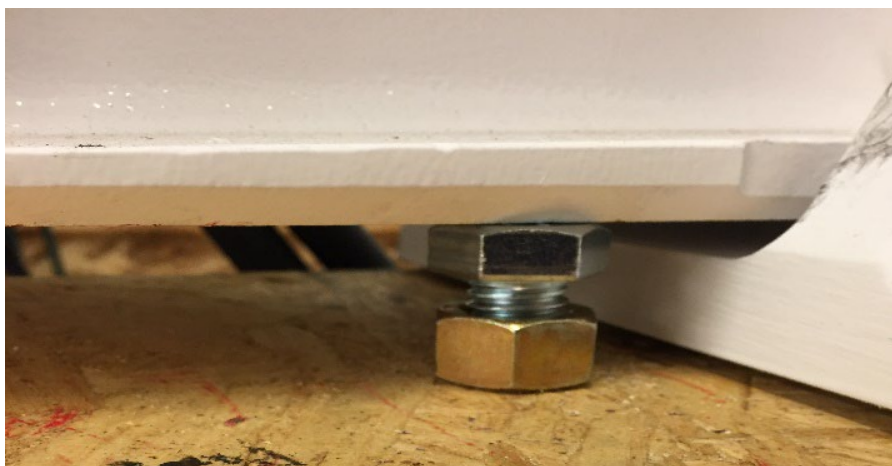


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4. **SUPPORT** foundation with plastic blocks, so bottoms of clevis assemblies are about 1/8 to 1/4 inch off stringer/saddle.



5. **IF** clevis will not separate from stringer using hydraulic jack, **THEN APPLY** additional pressure using supplied nut and bolt.



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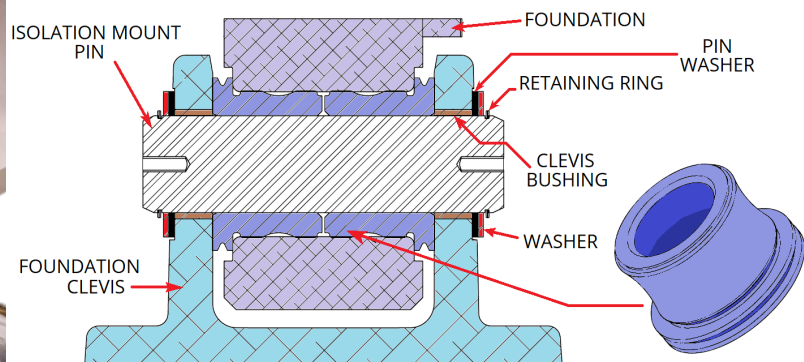
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NOTE:

- In some installations, it may be easier to remove pin from inside of foundation assembly.
- It is acceptable to remove just one side of a pin's hardware while leaving the other side's hardware installed.

6. **REMOVE** isolation mount pin from clevis as follows:

- a. With small straight tip screwdriver, **REMOVE** spiral retaining ring and washers from clevis pin.



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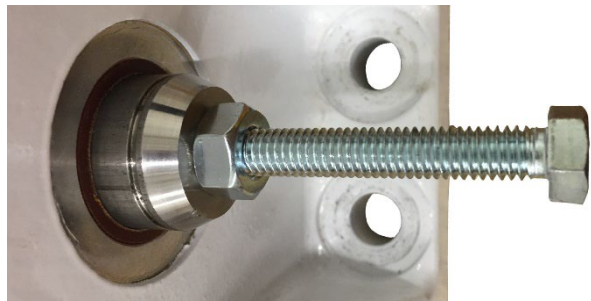
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Step 6 continued

NOTE:

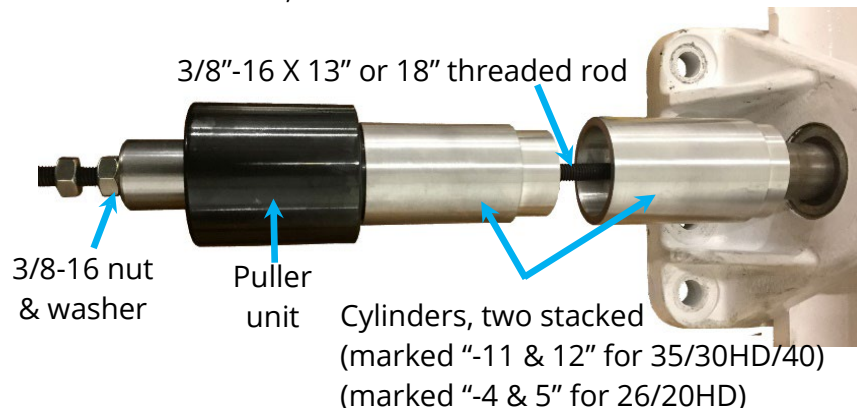
By tightening the lock nut on the 3/8-16 bolt, the bolt can be used to apply twisting force on clevis pin to assist in removal.

- b. **DRIVE** out isolation mount pin using a 3/8-16 machine screw, nut, and mallet.



- c. **IF** isolation mount pin is tight,
THEN:

- i. **APPLY** hydraulic ram to remove pin, as shown below, from either inside or outside foundation, whichever is easier.



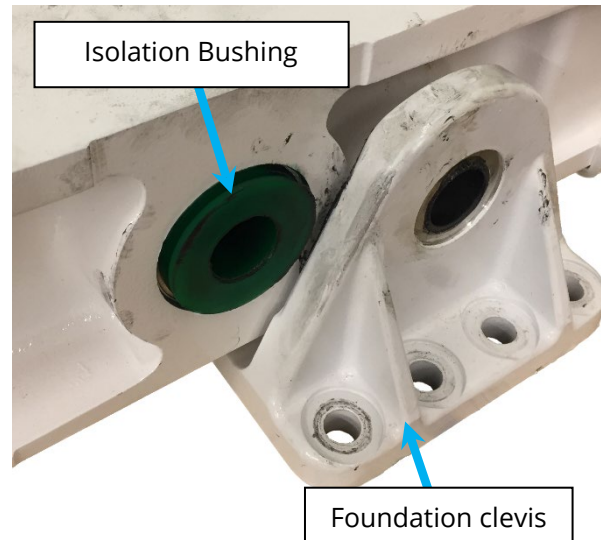
- ii. **PUMP** hydraulic pump to pull pin into cylinders.
- iii. **WHEN** puller runs out of stroke,
THEN RELIEVE hydraulic pressure, **TIGHTEN** nut and washer **AND CONTINUE** pumping until pin released.

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NOTE:

Tapping on outside of clevis while putting pressure on inside helps slide clevis off bushing.

7. **REMOVE** urethane isolation bushings as follows:
 - a. **SLIDE** foundation clevis off isolation bushings and toward gimbal shaft by using a rubber mallet.
 - b. **REMOVE** urethane bushings using isolation mount pin as lever to pry out bushing.



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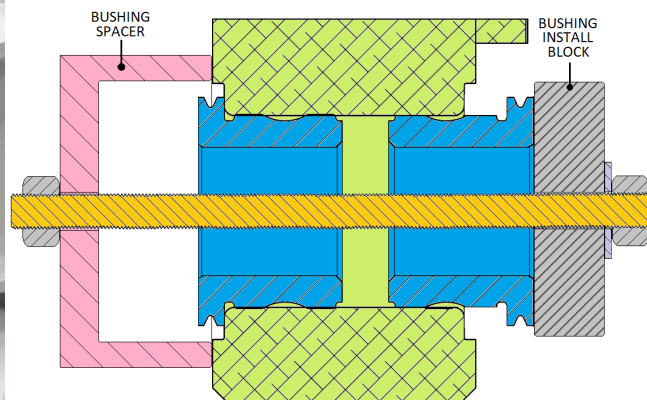
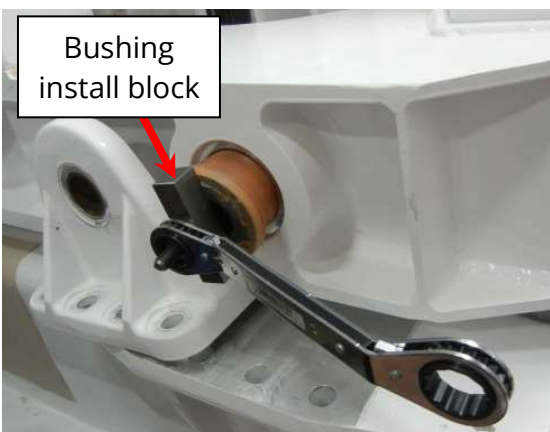
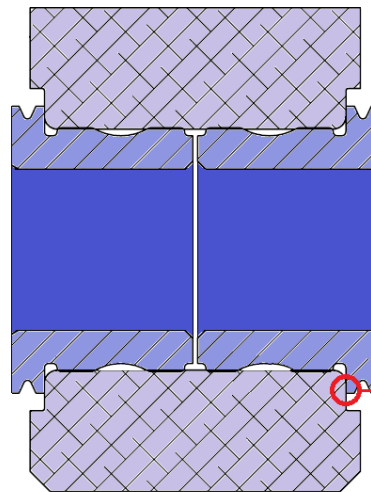
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8. **CLEAN** foundation bores and pins with abrasive pad.
9. **INSPECT** components for deep scoring, cracking, or pitting.
10. **INSTALL** new urethane isolation bushings and clevis pin as follows:

- a. **COAT** replacement bushings with thin film of black moly grease on inside and outside seating surfaces.

- b. **COAT** entire inside length of bore with thin film of black moly grease.

- c. **DRIVE** new bushing in flush to shoulder of bore with bushing install block (PN 11956), threaded rod, two nuts, and bushing spacer (PM 80288-3 or 80287-3).



- d. **SLIDE** clevis back into position.
- e. **ALIGN** clevis to urethane isolation bushings as close as possible.

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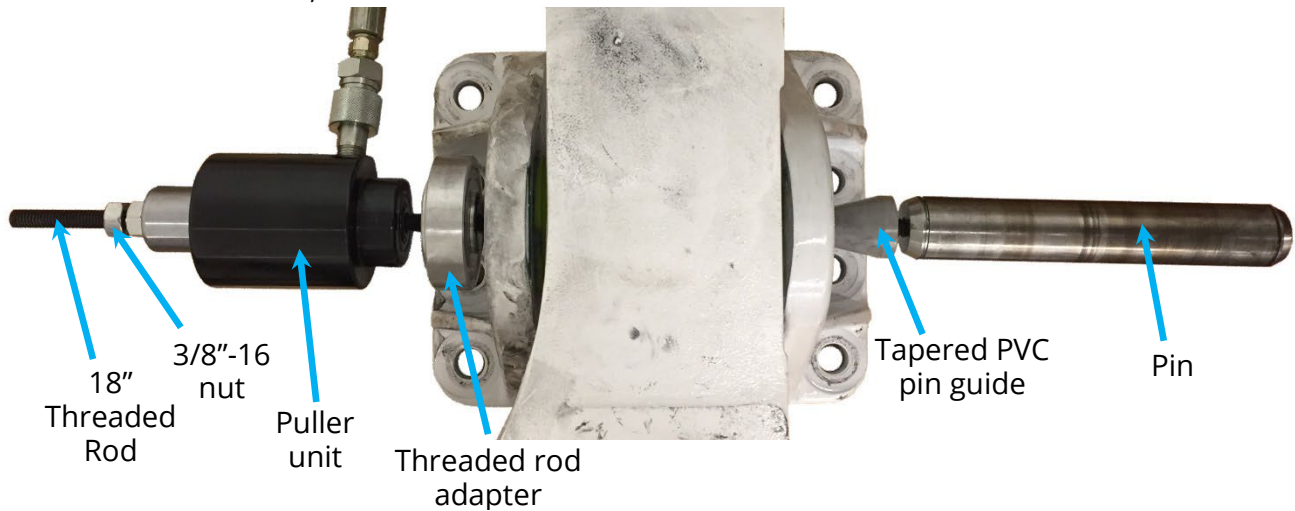
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Step 10 continued

- f. **APPLY** thin film of black moly grease to isolation mount pin.
- g. **ASSEMBLE** components, as shown, to reinstall pin from either inside or outside of foundation, whichever is easier.



- h. Using tapered PVC Pin Guide, to align pin in opening, **DRIVE** isolation mount pin into clevis as shown.
 - i. **PUMP** hydraulic pump to draw pin into isolation bushings.
 - j. **WHEN** puller runs out of stroke, **THEN RELIEVE** hydraulic pressure, **TIGHTEN** nut and washer **AND CONTINUE** pumping until pin is fully inserted.
 - k. **INSTALL** washers and new spiral retaining rings on both sides of pin.
11. **APPLY** marine grade silicone to bottom of each foundation clevis.



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12. **LIFT** frame with spreader jack to remove plastic blocks.
13. Before inserting into the foundation clevis, **APPLY** nickel-based anti-seize compound to threads of mounting screws and marine sealant to bottom of each washer.



14. **TORQUE** all mounting screws to **100 ft-lbs (136 Nm)** with 24 mm socket.
15. **REPEAT** procedure for bushings and pins on opposite side of foundation.

******* END *******

REVISION	DESCRIPTION	APPROVAL	DATE
1	Initial release	R Keown	14DEC2021
2	Removed clevis bushing replacement (not supported by Seakeeper). Minor edits.	A Patricio	21OCT2022
3	Seakeeper 40 release	A Patricio	24MAR2023