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SERVICE LETTER 255

Nose Gear Pivot Block and Fork Updates

Aircraft Makes/Model(s):	Float Model(s):	Compliance: Optional	By: MAS
Air Tractor AT-802 and AT-802A	10000A	Part Number: 1012382	Approved: DRH
		Date: 4/27/2026	Revision: E

LOG OF REVISIONS

Revision	Description	Date
A	Initial release	11/2/2023
B	Full rewrite to incorporate single-piece nose fork and centering spring options.	4/7/2025
C	Updated Kit 1012382-03 and Figure 4.	5/19/2025
D	Added roll pins (Item 7) to Kit 1012382-01, updated Figure 2 image.	1/15/2026
E	Updated Effectivity section.	4/27/2026

FAA approval has been obtained for technical data in this publication that affects STC or TSO design compliance.

EFFECTIVITY:

This service letter applies to Air Tractor models AT-802 and AT-802A with Wipline 10000 Amphibian Floats installed per STC SA01795CH. These modifications became standard at various times. Review Figure 1 and serial number ranges below to assess current configuration and the applicability of this service letter.

Production Configurations by Serial Number:

- S/N 10001A - 10314A, 10333A - 10342A: Spherical bearing pivot block, 3-piece nose fork, fixed centering spring
- S/N 10315A - 10332A, 10343A - 10408A: Tapered bearing pivot block, 3-piece nose fork, fixed centering spring
- S/N 10409A and later: Tapered bearing pivot block, single-piece nose fork, adjustable centering spring

COMPLIANCE:

Compliance is optional.

BACKGROUND:

The plain spherical bearings within the nose gear pivot block may exhibit premature wear. Similarly, the 3-piece nose fork can wear and develop slop at the bolted connections over time. This service letter describes installing a new pivot block assembly which incorporates a different style of bearings as well as options for a single-piece nose fork. The latter is compatible only with the updated pivot block. Both the pivot block with spherical bearings and the 3-piece nose fork have been obsoleted and will no longer be supported for replacement parts. Lastly, this service letter provides the option of an adjustment mechanism at the nose gear centering spring which is an added measure for combatting nose wheel shimmy.

COMPLIANCE METHOD:

If bearing or fork wear is present or historical data suggests a recurring issue, new parts may be installed in accordance with the various “Work Instruction” sections of this letter. The adjustable centering mechanism may be installed as a matter of operational convenience. **These instructions direct making these changes to both floats rather than creating an asymmetrical configuration.**

APPROXIMATE SHOP HOURS:

Labor to perform these work instructions on both floats is approximated in the table below.

Work Instruction	Labor Hours (Both Floats)
Pivot Block AND Single-Piece Nose Fork	6
Single-Piece Nose Fork Only (requires updated pivot block)	5
Adjustable Centering Spring Mechanism Only	2

WARRANTY INFORMATION:

Warranty coverage will include one (1) additional p/n 1012382-01, -02, -03, or -04 kit at no additional cost for 18 months from Service Letter 255 Revision B release date. Warranty coverage of additional unit will expire at the completion of 18 months.

TECHNICAL DATA:

Copies of this service letter, associated service kit (if applicable), float service manual, and float parts manual are available by contacting Wipaire Customer Service or Fire Boss Tech Support.

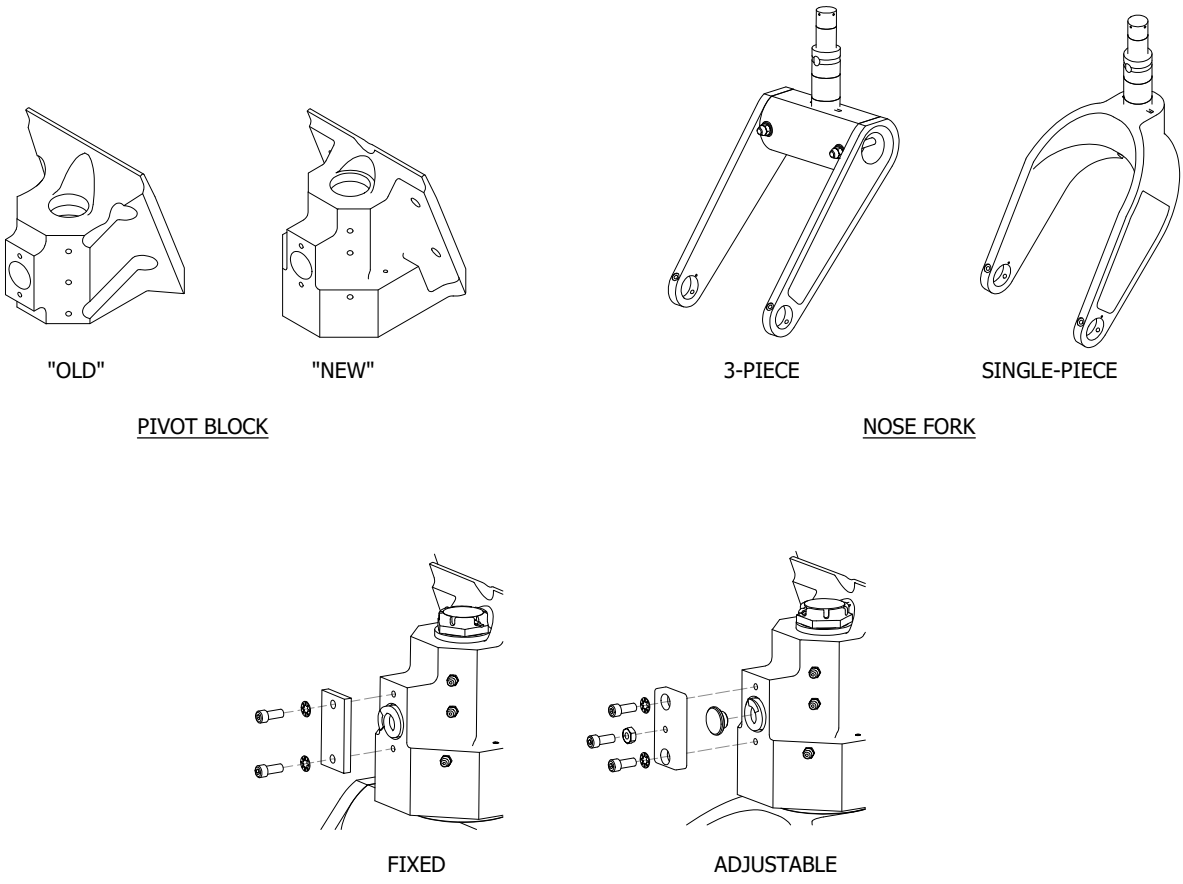

Figure 1 – Component Visual Reference

Work Instruction – Pivot Block AND Single Piece Nose Fork

ITEMS PROVIDED IN SERVICE KIT 1012382-01 (2 KITS PER FLOAT SET)			
ITEM	**QTY**	**PART NUMBER**	**DESCRIPTION**
1	1	1012821	ASSEMBLY, PIVOT BLOCK WITH FORK
2	4	AN7-24A	BOLT, 7/16-20, 1.9375 GRIP, UNDRILLED, STEEL
3	4	MS21044N7	NUT, LOCKING, REFULAR HEIGHT, 7/16-20 UNF
4	8	NAS1149F0732P	WASHER, 0.453 ID, 0.032 THK, STEEL
5	1	MS21044N4	NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF
6	1	MS24665-349	COTTER PIN
7	2	215-125-0750	PIN, ROLL, 1/8 X 3/4, SPRING

1. Position and prepare aircraft for safe maintenance.

2. Jack or hoist aircraft in accordance with Service Manual to perform maintenance on the Nose Gear (jacking nose gear only is acceptable).

NOTE: Refer to figure 2 throughout following steps. Ballooned items are included in kit.

3. Remove nose wheel as follows:

   a. Remove nose wheel axle nut and anti-rotation bolt. Locknut and cotter pin replacements are included with kit (items 5 and 6).

   b. Remove nose wheel axle, wheel assembly, and wheel spacers.

4. Remove four bolts (items 2, 3, 4) to detach nose spring bearing plate and the combined pivot block/yoke/fork assembly from nose spring. The bearing plate may be reused. Replacement hardware provided in kit.

5. Clean and inspect the parts that are to be reused:

   a. Nose gear spring

   b. Nose spring bearing plate

   c. Nose wheel axle, spacers, and associated hardware

   d. Nose wheel assembly

6. Attach nose spring bearing plate and updated gear pivot block and fork assembly (item 1) to nose spring using AN7 bolts, washers, and locknuts (items 2, 3, 4). Torque per Wipaire Service Manual 1002545 (AT-802A) or 1003546 (AT-802) section 16.4 – Float Hardware Recommended Retorque And Replacement Checklist.

7. Check wheel balance and pressure as needed then reinstall wheel and axle parts, except cotter pin (item 19). Torque on axle nut to be set in step 10.

8. Check servicing of pivot block. These assemblies are serviced with Aeroshell 64 from the factory. This grease or comparable is highly recommended for ongoing maintenance.

9. Service wheel bearings.

10. Review Service Manual 1002545 (AT-802A) or 1003546 (AT-802) section 2.7.5 – Nose Gear Axel And Pivot Adjustment / Shimmy Correction, making adjustments as needed. It is recommended that these settings be revisited after a working-in period (first few landings).

11. Repeat steps 3-10 on other float.

12. Lower aircraft from jacks or hoist.

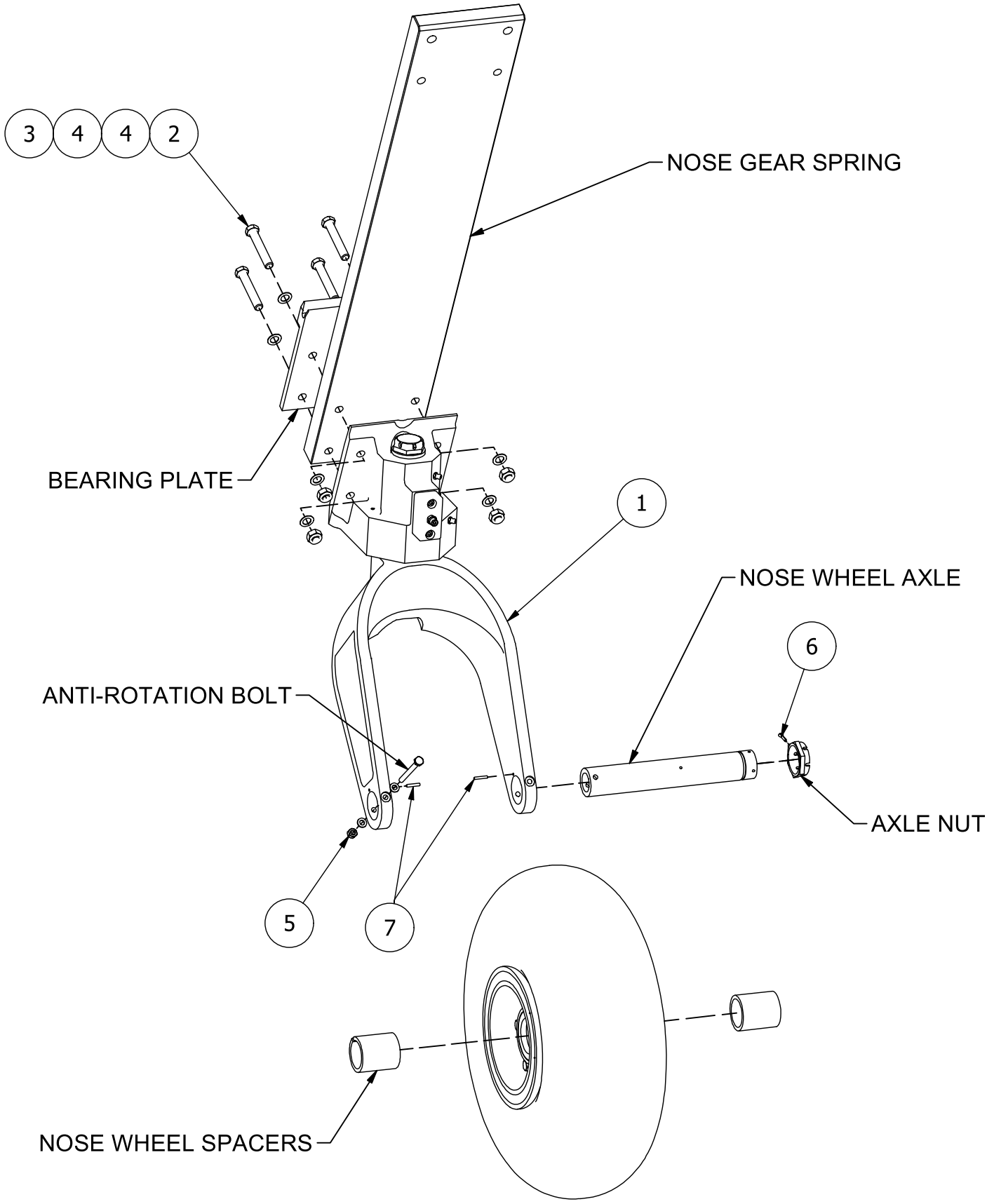

Figure 2 – Install Updated Pivot Block AND Single-Piece Nose Fork

Work Instruction – Single Piece Nose Fork

Requires updated Pivot Block, previously installed

ITEMS PROVIDED IN SERVICE KIT 1012382-02 (2 KITS PER FLOAT SET)			
ITEM	**QTY**	**PART NUMBER**	**DESCRIPTION**
1	1	1012646	ASSEMBLY, FORK AND PIN
2	1	1011924	SPACER
3	1	MS21044N4	NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF
4	2	215-125-0750	PIN, ROLL, 1/8 X 3/4, SPRING
5	1	MS24665-349	COTTER PIN
6	1	MS24665-359	COTTER PIN (PIVOT)

NOTE: The following instructions assume re-installation of whatever centering spring components are currently installed. If update is desired, refer to -04 kit and associated work instructions within this service letter.

1. Position and prepare aircraft for safe maintenance.

2. Jack or hoist aircraft in accordance with Service Manual to perform maintenance on the Nose Gear (jacking nose gear only is acceptable).

NOTE: Refer to figure 5 throughout remaining steps. Item numbers correspond to kit -03 table.

3. Remove nose wheel as follows:

   a. Remove nose wheel axle nut and anti-rotation bolt. Locknut and cotter pin replacements are included with kit.

   b. Remove nose wheel axle, wheel assembly, and wheel spacers.

4. Temporarily remove centering spring components, making note of the orientation of the retainer between the spring and ball, if fully removed.

5. Remove 3-piece nose fork by removing cotter pin (item 6), castle nut, and washer.

6. Place spacer (item 2) over pivot pin and into keyways of the fork and pin assembly (item 1).

7. Insert the assembled spacer/pin/fork into bottom of pivot block. Hold in place with previously removed washer and castle nut, hand tight.

8. Reinstall centering spring components.

9. Check wheel balance and pressure as needed then reinstall wheel and axle parts, except cotter pin (item 5). Torque on axle nut to be set in step 12.

10. Service pivot block with grease as needed. Aeroshell 64 or comparable grease is highly recommended.

11. Service wheel bearings.

12. Torque pivot pin nut, axle nut, and centering mechanism IAW Service Manual 1002545 (AT-802A) / 1003546 (AT-802) section 2.7.5 – Nose Gear Axel And Pivot Adjustment / Shimmy Correction. Install cotter pins (items 5, 6). It is recommended that these settings be revisited after a working-in period (first few landings).

13. Repeat steps 3-12 on other float.

14. Lower aircraft from jacks or hoist.

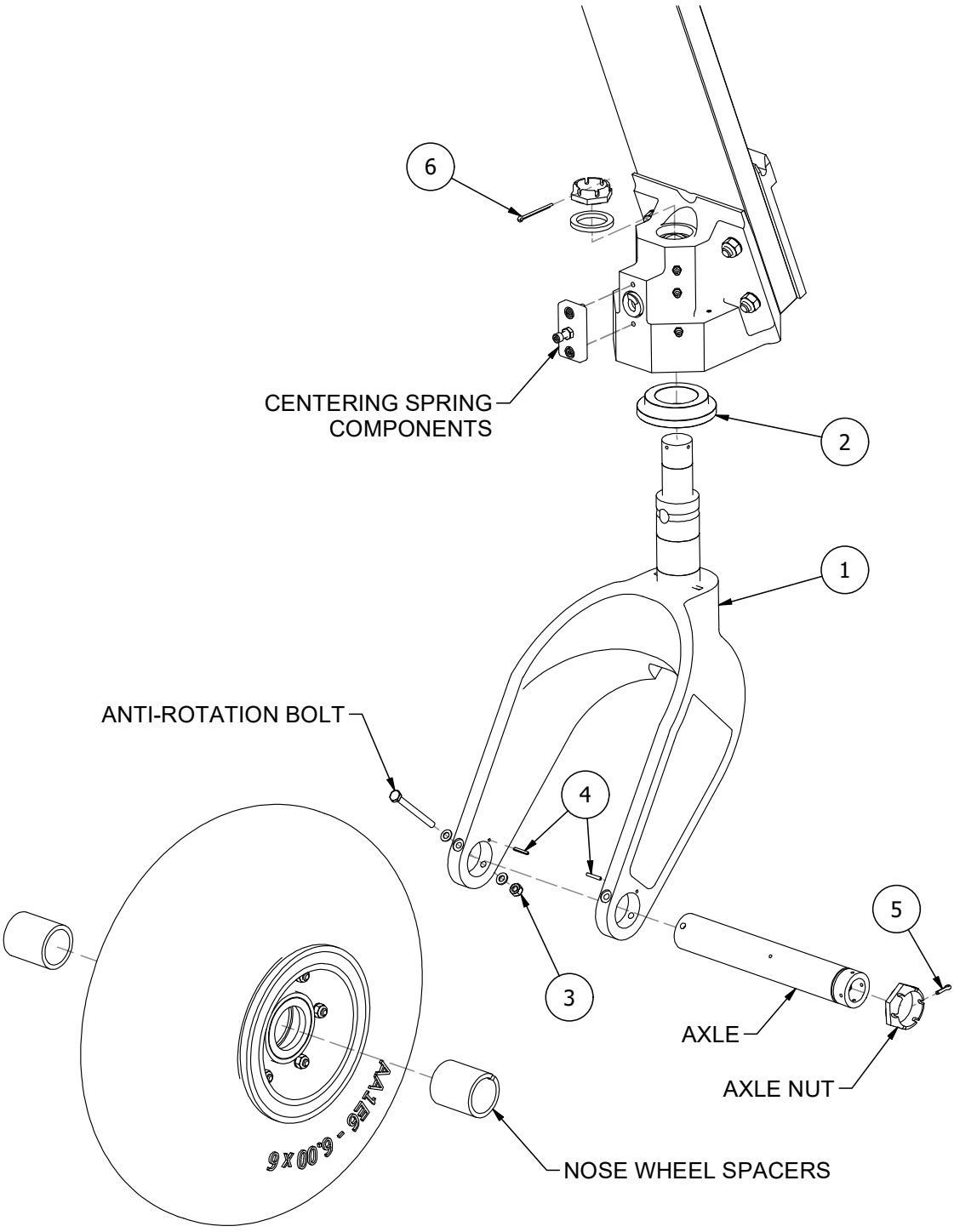

Figure 3 – Installing Single-Piece Nose Fork

Work Instruction – Adjustable Centering Spring Mechanism

Does not require updated Pivot Block or Single Piece Nose Fork

ITEMS PROVIDED IN SERVICE KIT 1012382-03 (2 KITS PER FLOAT SET)			
ITEM	**QTY**	**PART NUMBER**	**DESCRIPTION**
1	1	9588K18	SPRING, CENTERING, NOSE GEAR
2	1	1012698	PLUNGER, SPRING TENSION
3	1	1012692	CAP, PIVOT BLOCK
4	1	MS16997-60	SOCKET HEAD CAP SCREW, 1/4-20 x .75
5	2	MS16997-62	SOCKET HEAD CAP SCREW, 1/4-20 x 1
6	2	MS35333-40	STAR WASHER
7	1	MS35649-2252	NUT, PLAIN, HEXAGON, 1/4-20 UNC, STEEL

1. Position and prepare aircraft for safe maintenance.

2. Remove fixed-style components – two screws, two washers, cover plate, spring, and any washers that may have been used to increase spring force (not shown). Refer to figure 6. Retainer and pivot ball are to remain in place unless worn.

3. Install kit components as shown in figure 6. Tighten center screw to point where contact is made with plunger (item 2), then secure by tightening jam nut (item 6). Further adjustment may be performed in step 5.

4. Service pivot block as needed.

5. Adjust nose gear as needed. Service Manual 1002545 (AT-802A) or 1003546 (AT-802) section 2.7.5 – Nose Gear Axel And Pivot Adjustment / Shimmy Correction includes guidance on adjusting this mechanism.

Note: This adjustment affects the force required to caster the wheel/fork but not the bearing setting. Bearing setting is fundamental to the behavior of the nose gear and must be considered first, and any adjustments to bearing setting should be done with the centering spring adjustment fully backed off. The ability of the nose wheel to center (drop down) upon takeoff/ retraction must also be considered when adjusting the centering spring.

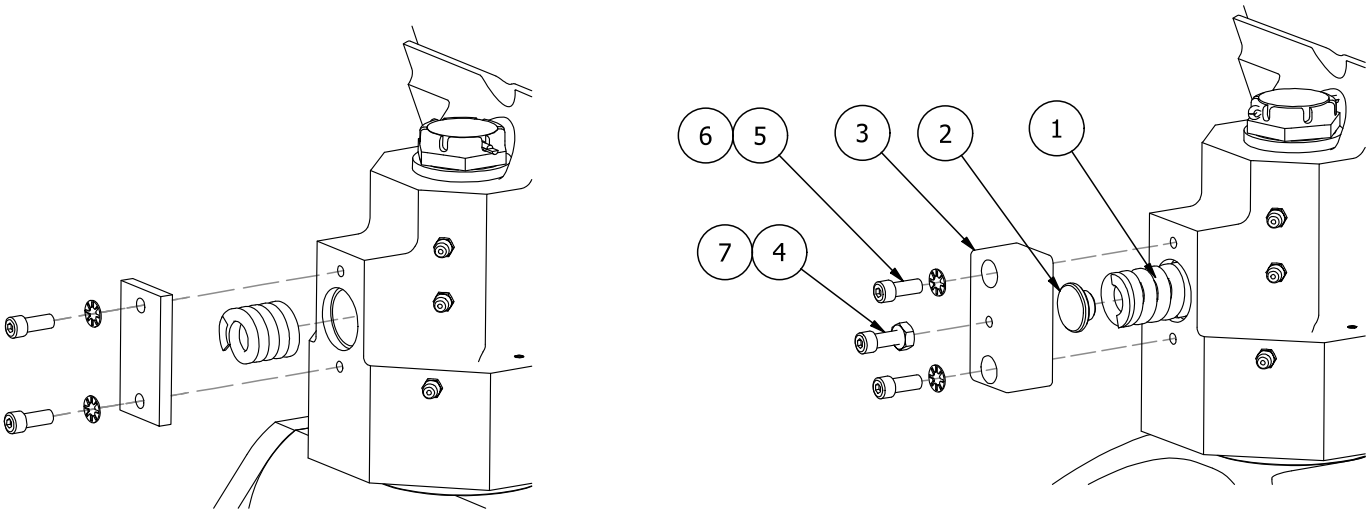

Figure 4 – Adjustable Centering Spring Mechanism

Aircraft Closing & Return to Service

1. Upon completion of inspection, enter information in Aircraft Logbook for completion of Wipaire Service Letter 255.