



A Textron Company

TECHNICAL BULLETIN

407-20-132

28 November 2022

MODEL AFFECTED: 407

SUBJECT: LITTER DOOR HANDLE ASSEMBLY,
MODIFICATION OF.

HELICOPTERS AFFECTED: Serial numbers 53000 through 53900, 53911 through 53999, 54000 through 54134, 54136 through 54166, 54300 through 54800, 54805 through 54989.

[Serial number 54135, 54990 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: At customer's option.

DESCRIPTION:

This technical bulletin provides instructions to modify the existing litter door handle into the current production litter handle 3190-203 which has additional safety features to increase the reliability. Applicability of this bulletin to any spare part shall be determined prior to its installation on an affected helicopter.

APPROVAL:

The engineering design aspects of this bulletin are Transport Canada Civil Aviation (TCCA) approved.

CONTACT INFO:

For any questions regarding this bulletin, please contact:

Bell Product Support Engineering
Tel: 1-450-437-2862 / 1-800-363-8023 / productsupport@bellflight.com

MANPOWER:

Approximately 5 man-hours are required to complete this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

WARRANTY:

There is no warranty credit applicable for parts or labor associated with this bulletin.

MATERIAL:**Required Material:**

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>
NAS9308M-4-04	Rivet	17 (1)
MS24665-170	Cotter Pin	2
3192-201	Case Assembly	1
3190-203 KIT	Handle Assy Retrofit Kit	1
MS24665-155	Cotter Pin	1 (2)
MS16624-4059	Retaining Ring	1 (2)
5044-3	Washer	1 (2)
5554-1	Washer	3 (2)
5554-3	Washer	2 (2)
3193-203	Bellcrank Assembly	1 (2)
3191-203	Hub (Handle) Assembly	1 (2)

NOTES:

1. Alternate fasteners are available as detailed in the BHT-ALL-SPM.
2. Part is included in the Handle Assy Retrofit Kit 3190-203 KIT.

Consumable Material:

The following material is required to accomplish this bulletin, but may not require ordering, depending on the operator's consumable material stock levels. This material may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>	<u>Reference *</u>
2010-12481-01	Sealant MIL-PRF-81733	1 PT (1)	C-251
2110-00010-00	Aliphatic Naphtha	1 GAL (1)	C-305
2230-00451-00	Epoxy Polyamide Primer	1 OZ (1, 2)	C-204
2100-00345-00	Chemical Film	1 QT (1)	C-100

* C-XXX numbers refer to the consumables list in the BHT-ALL-SPM, Standard Practices Manual

NOTES:

1. Quantity indicated is the format that the product is delivered in. Actual quantity required to accomplish the instructions in this bulletin may be less than what has been delivered.
2. Only required if the original case assembly is being retained.

SPECIAL TOOLS:

Not required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-ALL-SRM
BHT-ALL-SPM

PUBLICATIONS AFFECTED:

BHT-407-MM, Maintenance Manual
BHT-407-IPB, Illustrated Parts Breakdown

ACCOMPLISHMENT INSTRUCTIONS:

1. Prepare the helicopter for maintenance.
2. Gain access to the litter door (1, Figure 1, Detail A).
3. Remove the screws (2, Detail B), washers (3) and cover (4).
4. Remove and discard the cotter pin (5, Detail C).
5. Remove and retain the washer (6) and straight pin (7) from the lower rod assembly (8) and the bellcrank (9).
6. Remove and discard the cotter pin (10).
7. Remove and retain the washer (11) and straight pin (12) from the upper rod assembly (13) and the bellcrank (9).

-NOTE-

Make a note of the lock's orientation prior to removal for the installation.

CAUTION

Inserting the key in the lock will prevent the key pins from falling out if the barrel is mistakenly disassembled.

8. Remove the nut (14, Detail D), cam (15) and nut (16). Remove the lock (17). Retain for later usage.
9. Remove the existing fasteners on the currently installed case assembly (18, Detail C) (BHT-ALL-SRM).
10. Remove the case assembly (18), bellcrank (9) and bushing (19) from the door (1).

-NOTE-

The hub (handle) assembly (20) which is a sub assembly of the existing case assembly (18) must also be discarded.

11. Discard the bellcrank (9) and entire case assembly (18).
12. Clean the litter door (1, Detail A) of all residual sealant from the previous case assembly with Aliphatic Naphtha (C-305) (BHT-ALL-SPM).
13. Assemble the new litter door handle as follows:

CAUTION

During installation, the washer (22, detail E) shall be orientated to the stop plate (23) that is mounted on inboard side of the case assembly (18) as shown in detail F.

CAUTION

Take care not to overly stretch the retaining ring (24, detail E) during installation. The maximum diameter when the ring is properly seated must not exceed the limits as shown in View F.

- a. Locate the hub (handle) assembly (21, Detail E) on the new case assembly (18) and with the washer (22) on inboard side of the new case assembly (18) against the stop plate (23, View F). Lock with the retaining ring (24).
- b. Using a feeler gauge, determine the shims required between the washer (22, Detail E) and retaining ring (24) to obtain a maximum gap of 0.005" to 0.000" inch.

-NOTE-

Shim (25) thickness is 0.010" Inch (0.254mm). Shim (26) thickness is 0.005" Inch (0.127mm)

- c. Remove retaining ring (24) and fill gap as required by adding the necessary shims (25, 26). Re-install retaining ring (24).
14. Install the newly assembled handle assembly (27) on the litter door as follows:

CAUTION

The following step is to ensure the alignment between the case and existing opening on the door for the lock.

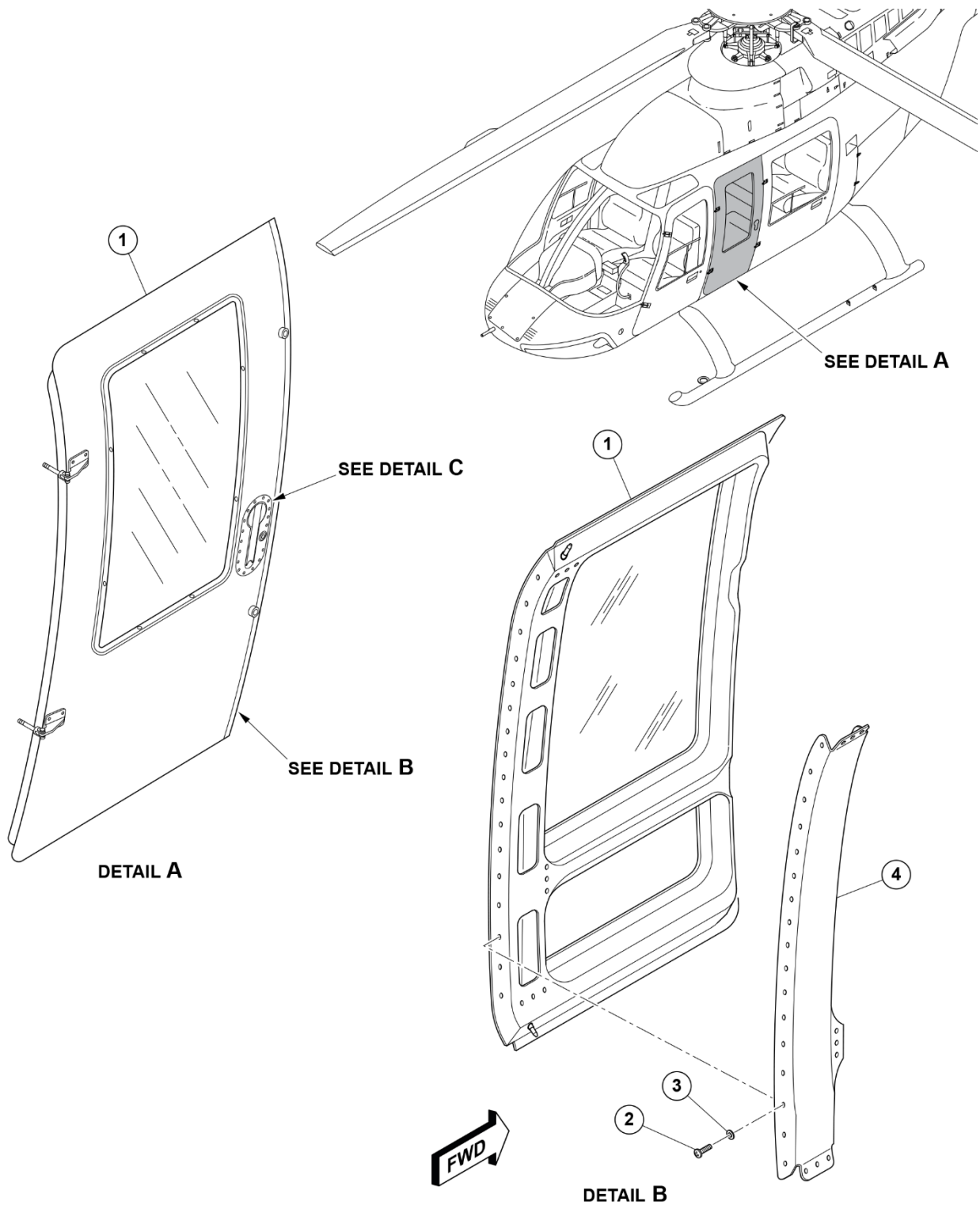
- a. Temporarily locate the new handle assembly (27) on the litter door, along with the new bellcrank (28) and bushing (19). Ensure the components are fully into the support (29). Locate the lock (17, Detail D) on the handle assembly (27) with nut (16).

CAUTION

Take care not to drill into the bellcrank (28).

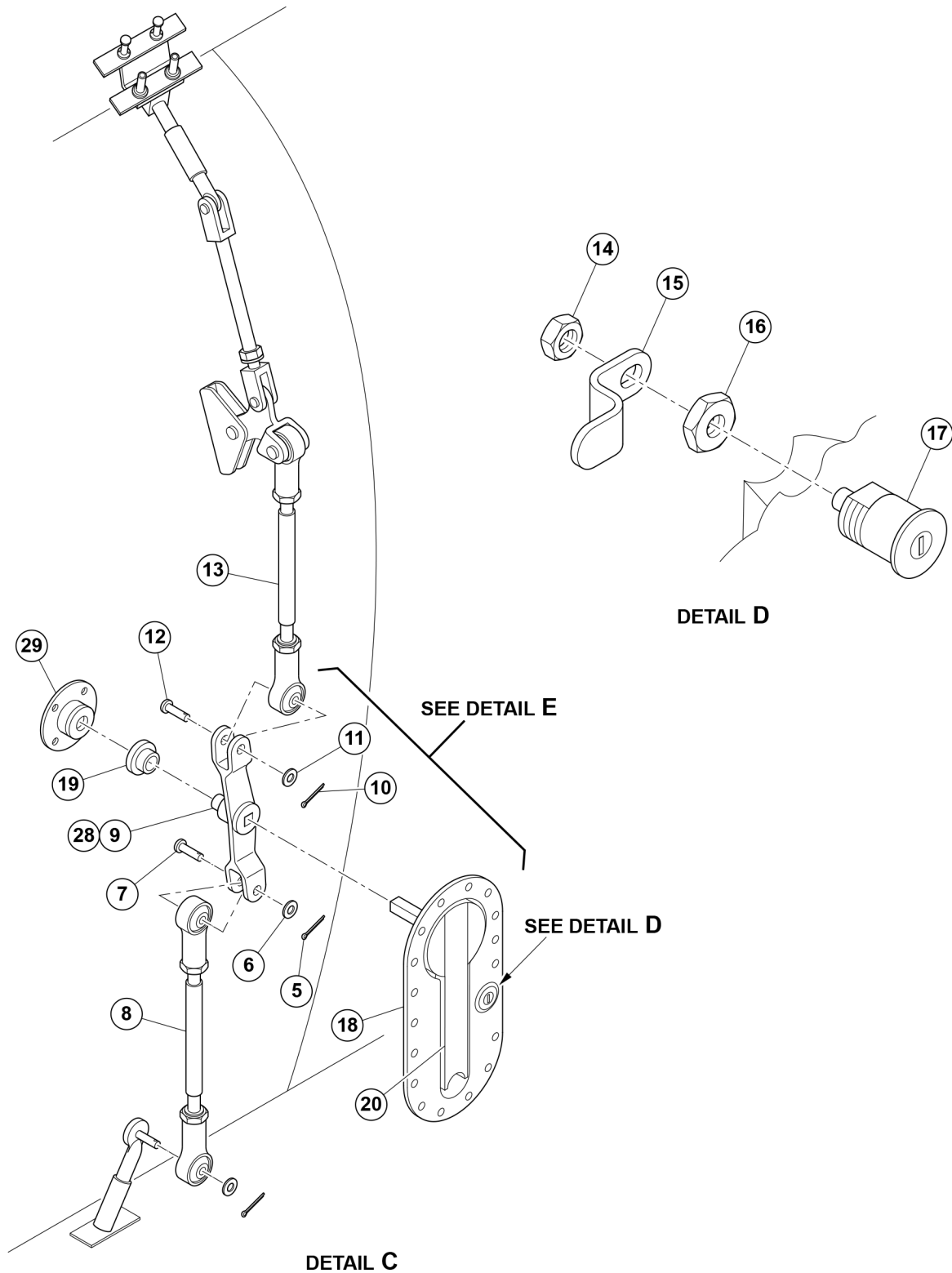
- b. While maintaining proper edge distance (BHT-ALL-SRM, Chapter 3), transfer the existing fastener holes from the litter door (1, Detail A) into the handle assembly (27, Detail E).
15. Remove the nut (16, Detail D), lock (17), bellcrank (28, Detail E) bushing (19) and handle assembly (27). Deburr all newly drilled holes.
16. Clean all debris in the surrounding area and inside of the litter door (1, Detail A, B).
17. Clean the faying surfaces of the litter door (1, Detail A) and handle assembly (27, Detail E) with aliphatic naphtha (C-305).

18. Locate the bushing (19) and bellcrank (28) into the support (29). Attach the upper rod assembly (13) to the bellcrank (28) with the straight pin (12), washer (11), and new cotter pin (10).
19. Attach the lower rod assembly (8, Detail C) to the bellcrank (28) with the straight pin (7), washer (6), and new cotter pin (5).
20. Apply sealant (C-251) to the faying surface of the new case assembly (18, Detail E).
21. Locate the handle assembly (27) on the litter door (1, Detail A) and through the bellcrank (28, Detail C, E). Insert new cotter pin (30, Detail E) through the bellcrank (28) and hub (handle) assembly (21).
22. Wet install the rivets (31, Detail E) with sealant (C-251).
23. Apply Sealant (C-251) to the faying surface of the lock (17, Detail D).
24. Install the lock (17) into the lock set hole.
25. Install the nut (16), cam (15) and nut (14).
26. Install cover (4, Detail B) on the litter door (1) with screw (2) and washer (3).
27. Make an entry in the helicopter logbook and historical service records indicating compliance with this Technical Bulletin.



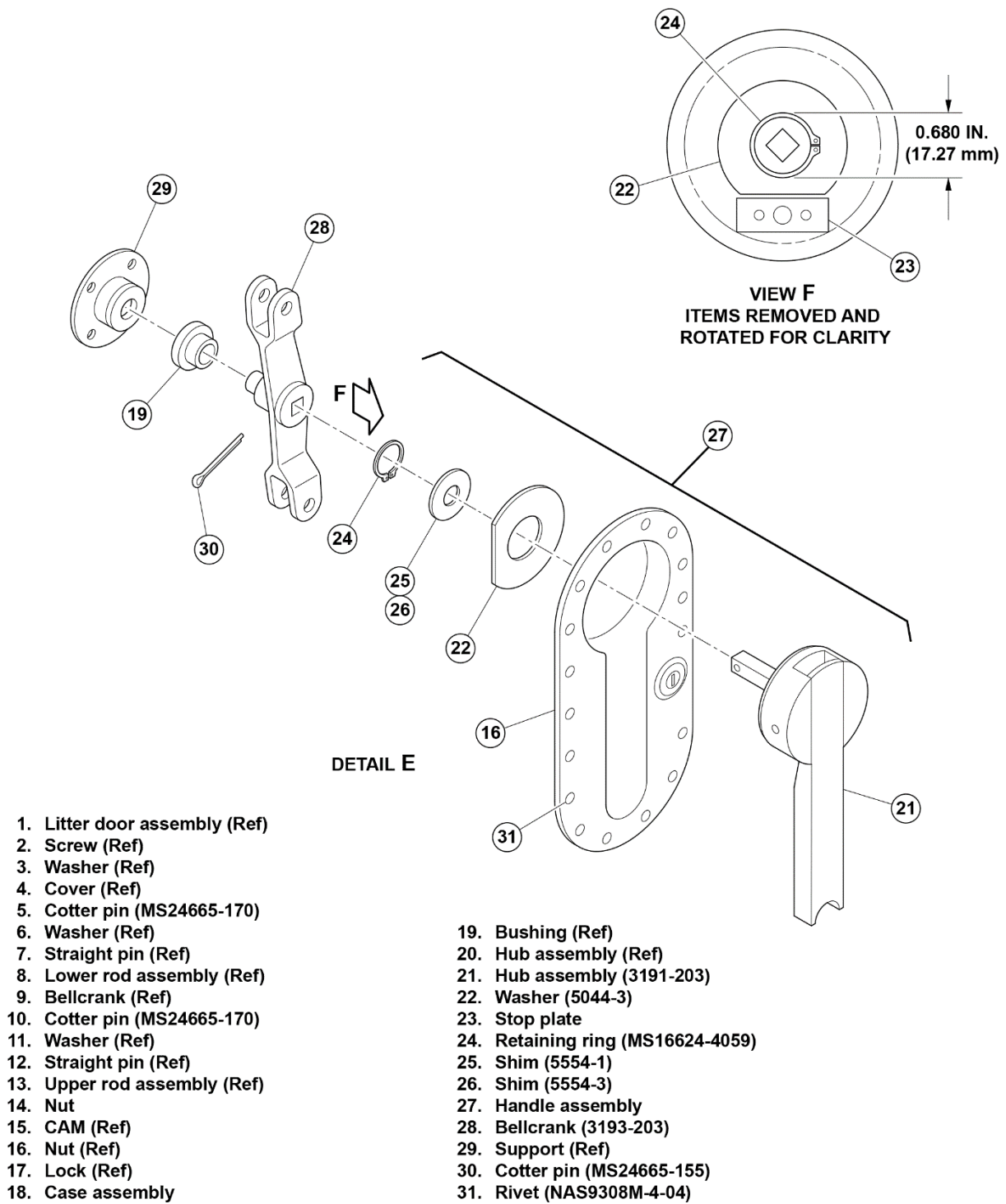
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Figure 1 - Modification of Litter Door Handle (Sheet 1 of 3)



20923_001b

Figure 1 - Modification of Litter Door Handle (Sheet 2 of 3)



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Figure 1 - Modification of Litter Door Handle (Sheet 3 of 3)