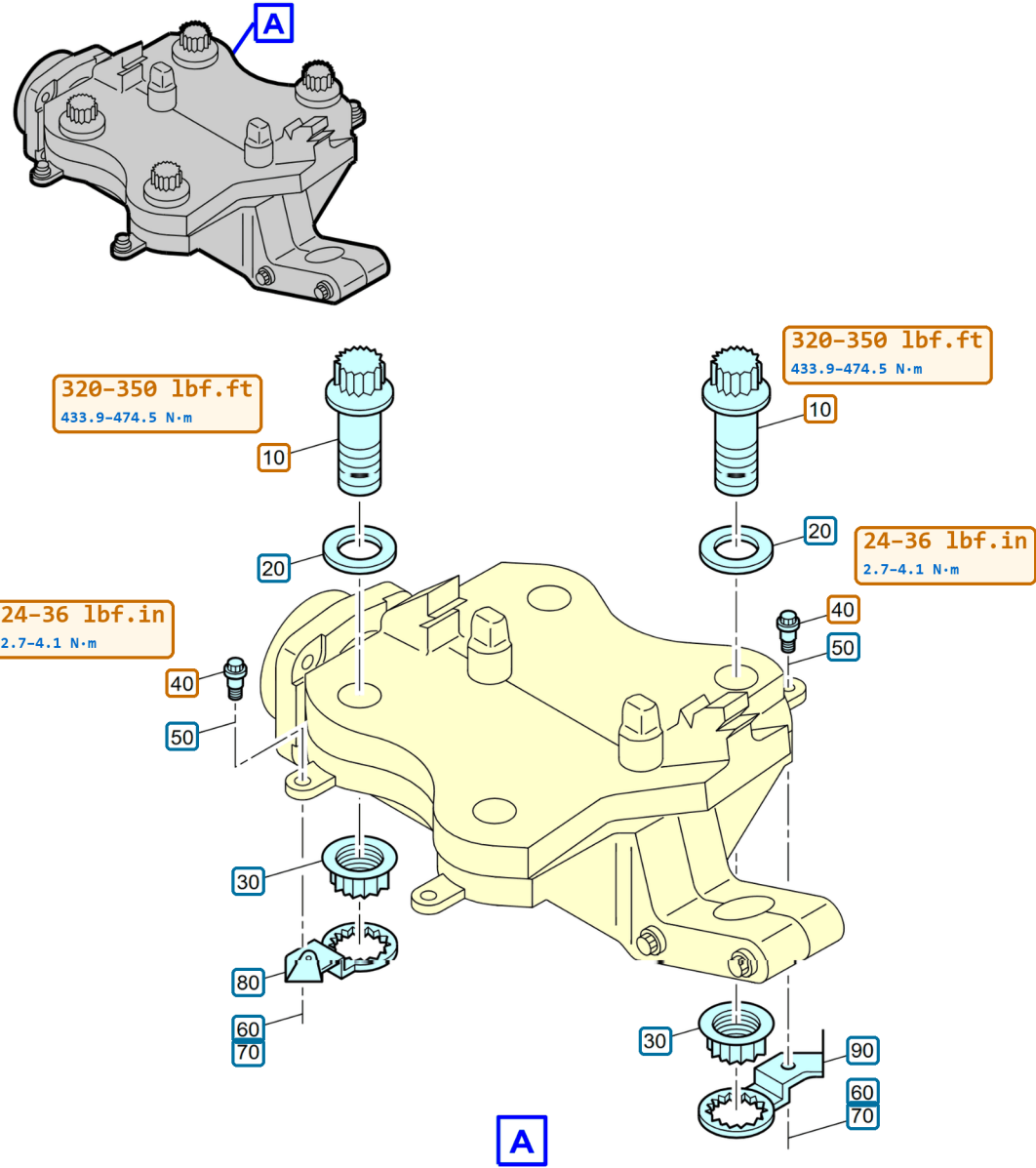


CFM56-5B · FORWARD ENGINE MOUNT · Pylon attach hardware

IPC 71-21-11-04 (figure and part numbers) · AMM 71-00-00-400-042-A03 (torques) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	Bolt	83769H14-17	Hold nut (30) while torquing. 2 per side.
20	Washer	VN936NP14C	AS4987NP14C · NS202139C14 · RA82088-14
30	Nut	VN401B144	
40	Bolt, retainer plate	77458-3-5	PBF1340-3-5 · AIC457-3-5
50	Washer	VN936NP3C	AS4987NP3C · NS202139C3 · RA82088-3
60	Washer	VN936NP3	AS4987NP3 · NS202139-3 · RA82089-3
70	Nut	NAS1805-3P	
80	Retainer plate LH	238-0226-507	
90	Retainer plate RH	238-0226-508	

TORQUE SUMMARY

Bolts 10 **320-350 lbf.ft**
433.9-474.5 N.m

Bolts 40 **24-36 lbf.in**
2.7-4.1 N.m

Bolt 10 with adapter 98D71203002206: at 22.5° set the wrench to 301-329 lbf.ft (408.1-446.1 N-m); at 67.5° set it to 307-336 lbf.ft (416.2-455.5 N-m).

After torquing, make sure the mount touches the pylon.

Before installation, the rotation torque of bolt 10 must be between 70 lbf.in and 50 lbf.ft (if lower, replace the nut and repeat).

N·m = m.daN × 10 (the AMM gives m.daN).

POWER PLANT DATA

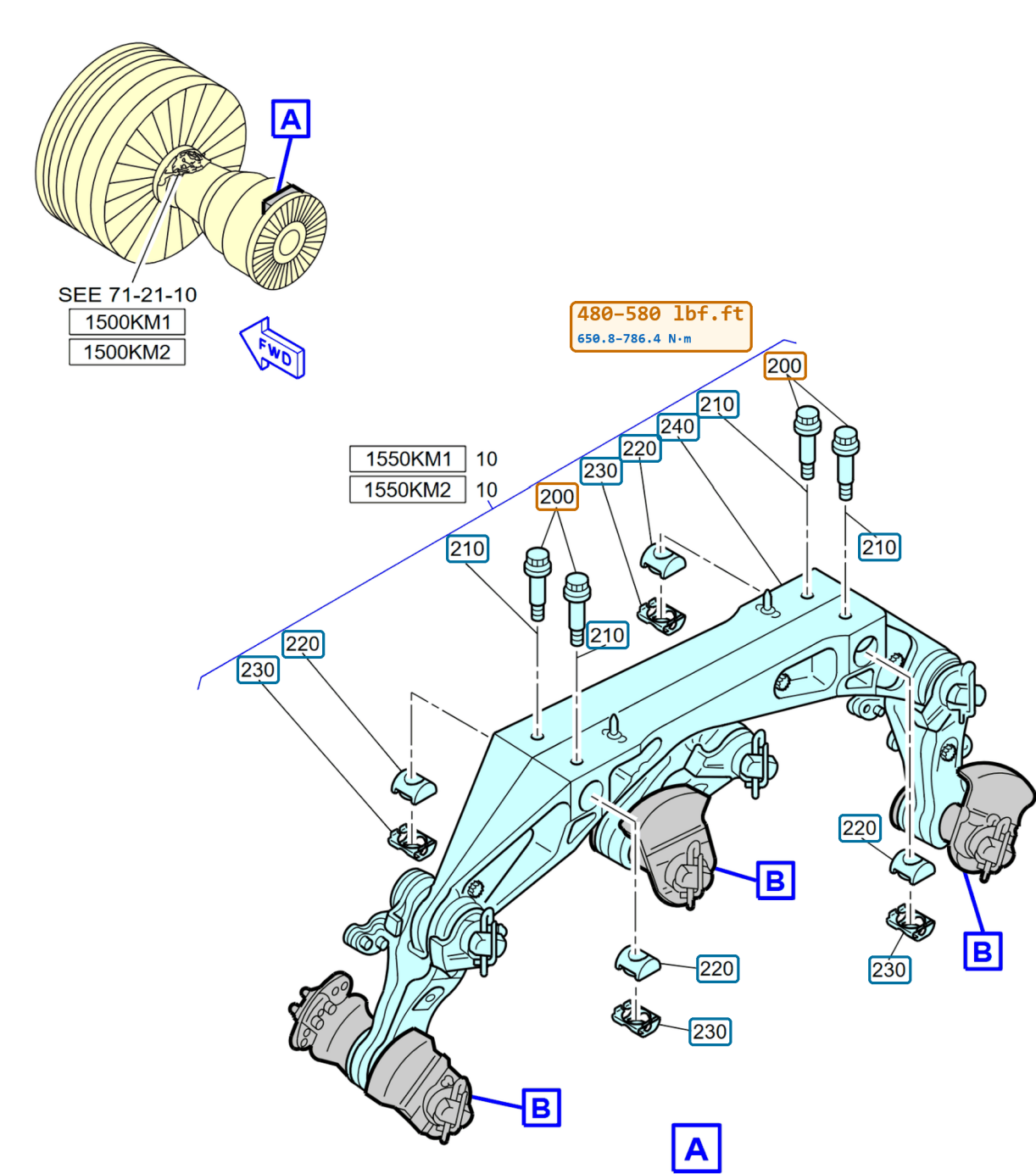
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Figure 71-21-11-04 (SHEET 1) - Pylon attach hardware. Select the installation context in the IPC to find the aircraft applicability.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · AFT ENGINE MOUNT · Pylon attach hardware

IPC 71-22-10-01A (figure and part numbers) · AMM 71-00-00-400-042-A03 (torques) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
200	Bolt	83769H16-14	4 per kit. Hold the barrel nut (220) while torquing.
210	Washer	VN936NP16C	AS4987NP16C · NS202139C16 · RA82088-16
220	Barrel nut	SL4001-16	
230	Retainer (nut)	SLR4001-16B	
240	Mount assembly	642-2300-3	238-0230-15 (pre SB RA32171-11) · 238M0230-15 · 642-2300-11 (post SB RA32071-164)

TORQUE SUMMARY

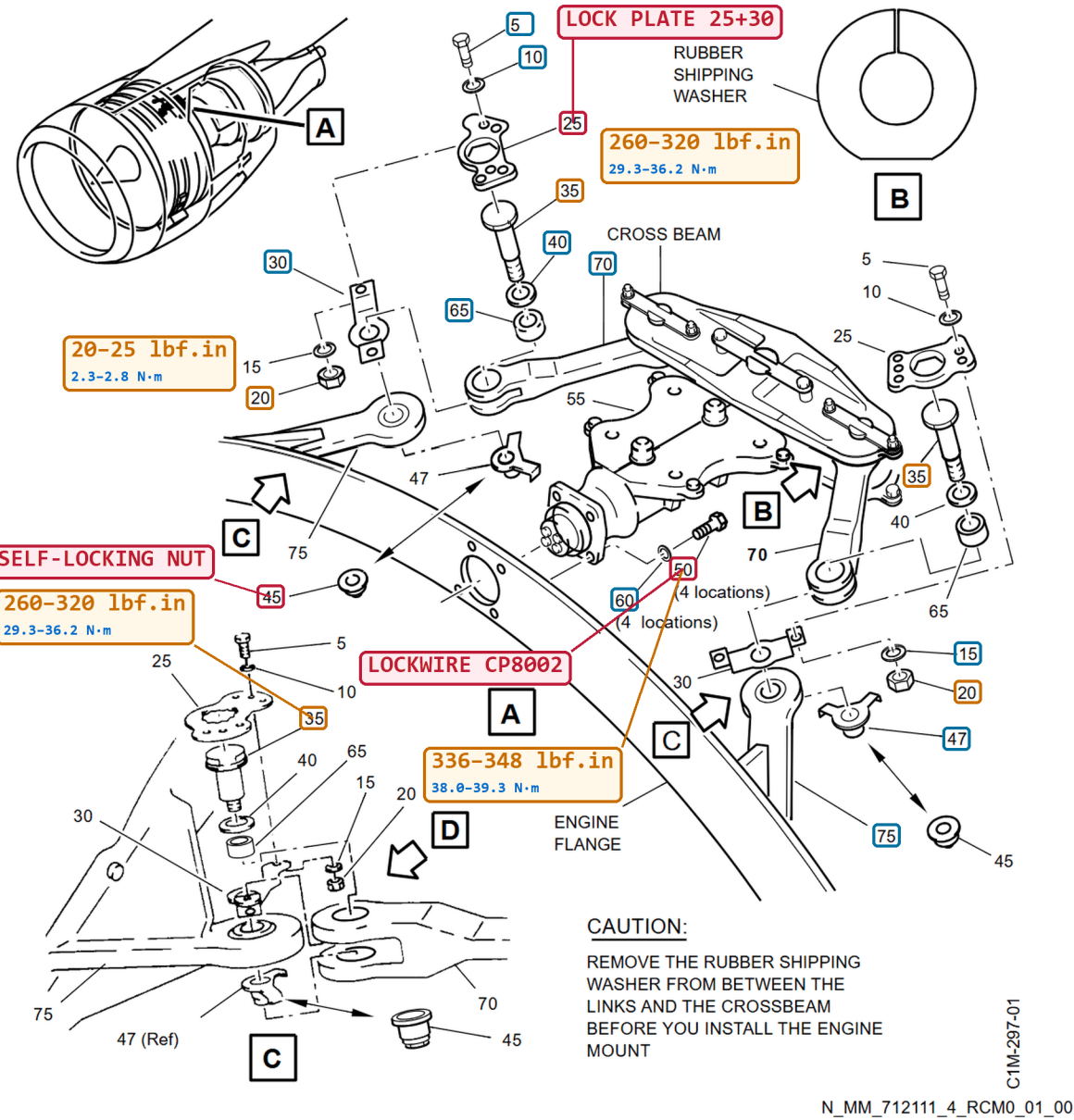
Bolts 200

480-580 lbf.ft
650.8-786.4 N·m

Bolt 200 with adapter 98D71203002208: at 22.5° set the wrench to 451-545 lbf.ft (611.5-738.9 N·m); at 67.5° set it to 461-557 lbf.ft (625.0-755.2 N·m). Before installation, the rotation torque of bolt 200 must be between 90 lbf.in and 66.66 lbf.ft (if lower, replace the nut and repeat). N·m = m.daN × 10 (the AMM gives m.daN: 65.08-78.64).

CFM56-5B · FORWARD ENGINE MOUNT · Engine-side attach & locking

AMM 71-21-11-400-041-A (install) · IPC 71-21-11-02A · Link bolts · retainers · lockwire · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
5	Bolt, retainer	TO CHECK	Hold it while torquing nut 20. IPC 71-21-11-02A.
10, 15	Washers	TO CHECK	
20	Nut, self-locking	TO CHECK	Check the locking feature first (see notes).
25	Retainer (on bolt head)	TO CHECK	Locks bolt 35: its holes must line up with retainer 30.
30	Retainer (on link)	TO CHECK	Wings must not touch the link sides.
35	Link bolt (3 positions)	TO CHECK	Hold nut 45/47 while torquing. Min torque first, then more only until the holes align.
40	Washer	TO CHECK	
45 / 47	Nut, self-locking (47 = with wings)	TO CHECK	Use RTV 88 (CP2541) on washers 40 / retainers 30.
50	Bolt, mount to engine flange (4 places)	77458-6H15	PBF1340-6-15H · AIC457-6H15 · 275B0206-15H (IPC item 010)
60	Washer (4 places)	TO CHECK	
65	Bushing	5700B1423-507	IPC item 140
70	Link assembly	238-0210-505	238-0210-507 (IPC item 130)
75	Support assembly (on engine flange)	TO CHECK	Shear pins 80, washers 100/105/110 (not drawn in this figure).
85, 90	Bolts, support to engine flange	TO CHECK	Not shown in the figure.
95	Bolts, support to engine flange	TO CHECK	Not shown in the figure.

TORQUE SUMMARY

Link bolts 35	260-320 lbf.in
Nuts 20	20-25 lbf.in
Bolts 50 + LOCKWIRE	336-348 lbf.in
Bolts 85, 90 + LOCKWIRE	168-228 lbf.in
Bolts 95 + LOCKWIRE	744-816 lbf.in

Every amber box = same torque as its tag (bolts 35 x3, nuts 20 x2).

LOCKING: bolts 50, 85, 90 and 95 are safetied with lockwire 0.032 in (0.8 mm) CP8002 (85/90/95 also allowed with safety cable). Bolts 35 are locked by retainers 25+30. Nuts 20, 45 and 47 are self-locking.

Self-locking nut check (20, 45): run it by hand to the end, then at least 3 threads must show; if the running torque is too low, replace the nut. Then the removal force must be above 2.0 lbf.in or replace it.

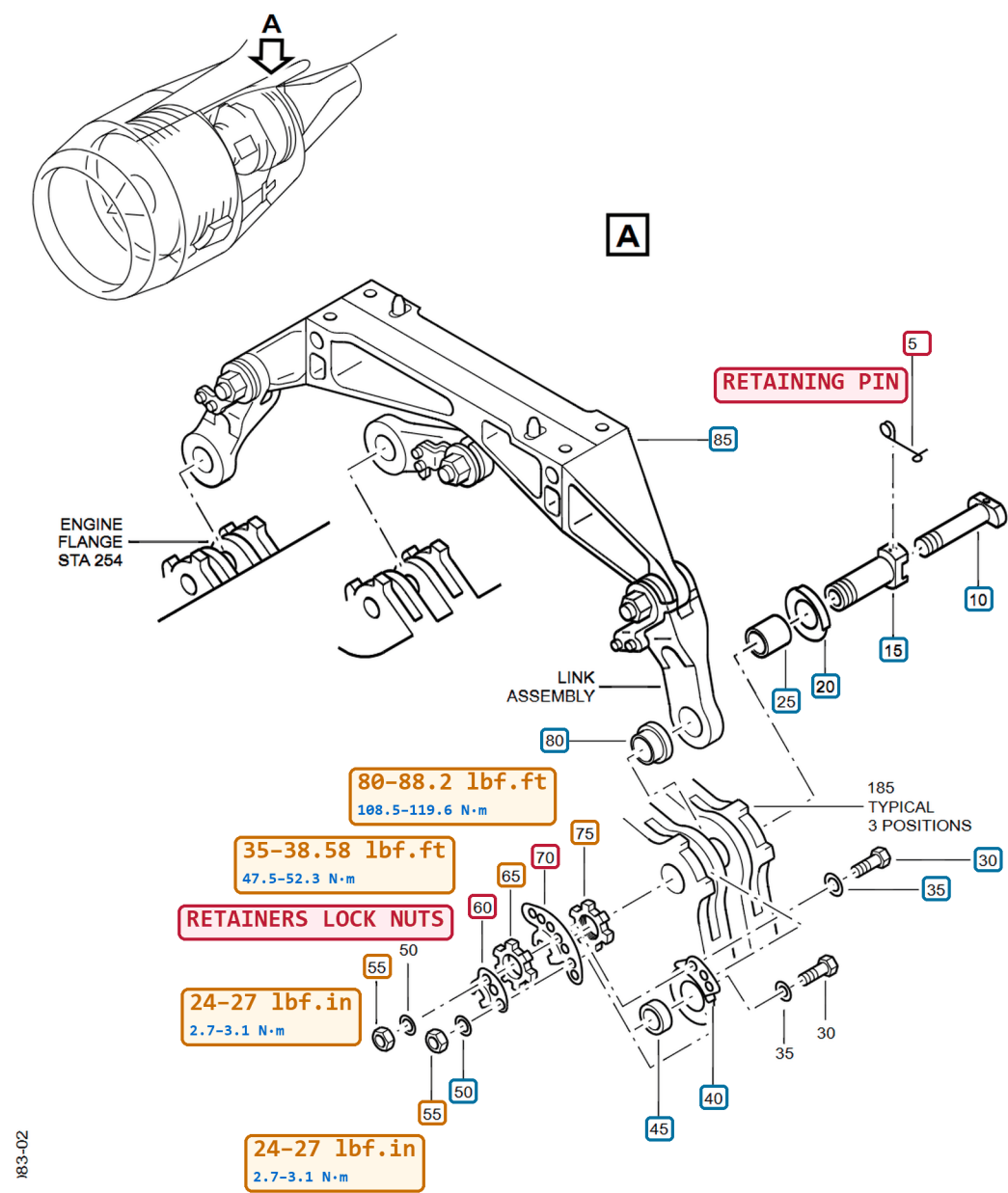
New mount: remove the rubber shipping washers between links and crossbeam first.

Figure 71-21-11-400-041-A (Rev. 1/2) - Forward Engine Mount. Item numbers = AMM task numbers (not IPC).

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · AFT ENGINE MOUNT · Engine-side attach & locking

AMM 71-22-11-400-041-A (install) · IPC 71-22-11-03 · Brackets · shear pins · spanner nuts · retainers · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
5	Retaining pin	S700M1195C1	S700M1195-1 (IPC item 010). Goes through shear pin 15; replace if worn.
10	Bolt	TO CHECK	Silicone MoS2 CP5063 on threads.
15	Shear pin	TO CHECK	CP5063 on outer surface. Install with brackets 20 and 40.
20, 40	Brackets (engine flange)	238-0244-511	238-0244-515 · 238-0244-519 (IPC item 230, check which one)
25, 45	Bushings	TO CHECK	IPC 71-22-11-03 items 250 / 260 (S700B...-515).
80	Shoulder bushing	TO CHECK	Shoulder towards the INSIDE of the engine range.
30	Bolts (retainer)	TO CHECK	
35, 50	Washers	TO CHECK	Countersunk washers go under the bolt heads.
55	Nuts (retainer)	TO CHECK	
60, 70	Retainers	TO CHECK	Hold against bracket 40: the bolt holes must line up. IPC items 140-220.
65	Spanner nut on bolt 10	TO CHECK	Flat side forward. Wrench RSE1098-1 (6 in).
75	Spanner nut on pin 15	TO CHECK	Counterbore towards shear pin. Wrench RSE1098-5 (8 in).
85	Aft engine mount	642-2300-3	238-0230-15 · 642-2300-11 (see aft mount sheet)

TORQUE SUMMARY	
Spanner nut 75	80-88.2 lbf.ft
Spanner nut 65	35-38.58 lbf.ft
Nuts 55 (retainers)	24-27 lbf.in

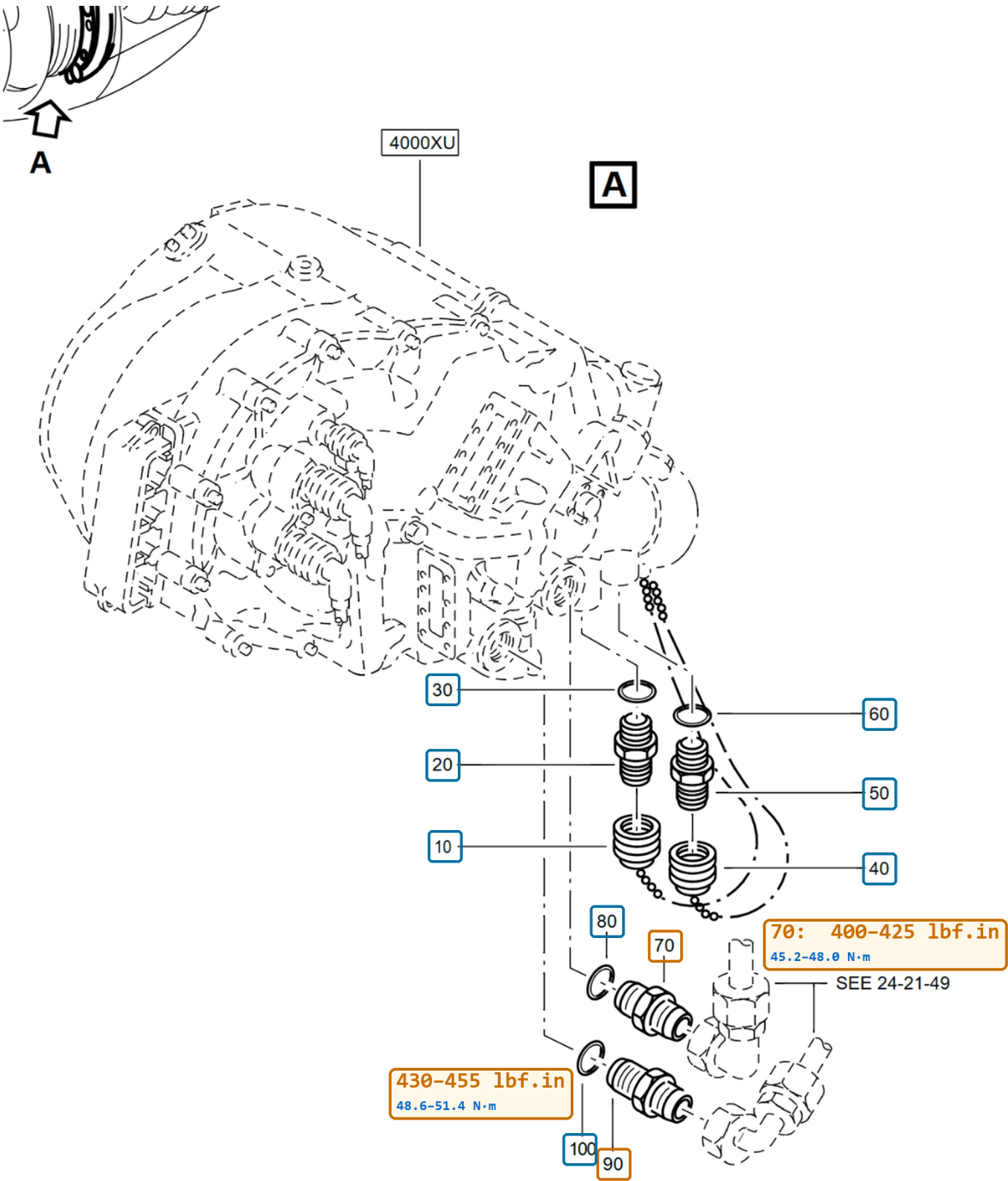
LOCKING: after torquing, retainers 70 and 60 sit against bracket 40 and are bolted with bolts 30 / nuts 55: their holes must line up with the spanner nuts. If not, tighten the nuts a little more (never above 95 lbf.ft for nut 75 or 42 lbf.ft for nut 65). Then fit the retaining pin 5 through shear pin 15.

Retaining pin check: with a 0.03 in (0.76 mm) feeler gage the clearance to the TRF case must be at least 0.03 in; if less, contact the nacelle manufacturer.

A spanner wrench used as an adapter changes the real torque: use the AMM 20-21-11-911-001 formula. N.m = m.daN x 10.

Figure 71-22-11-991-30000-06-A (SHEET 1) - Aft Engine Mount. Item numbers = AMM task numbers (not IPC). Same hardware at the 3 engine flanges.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

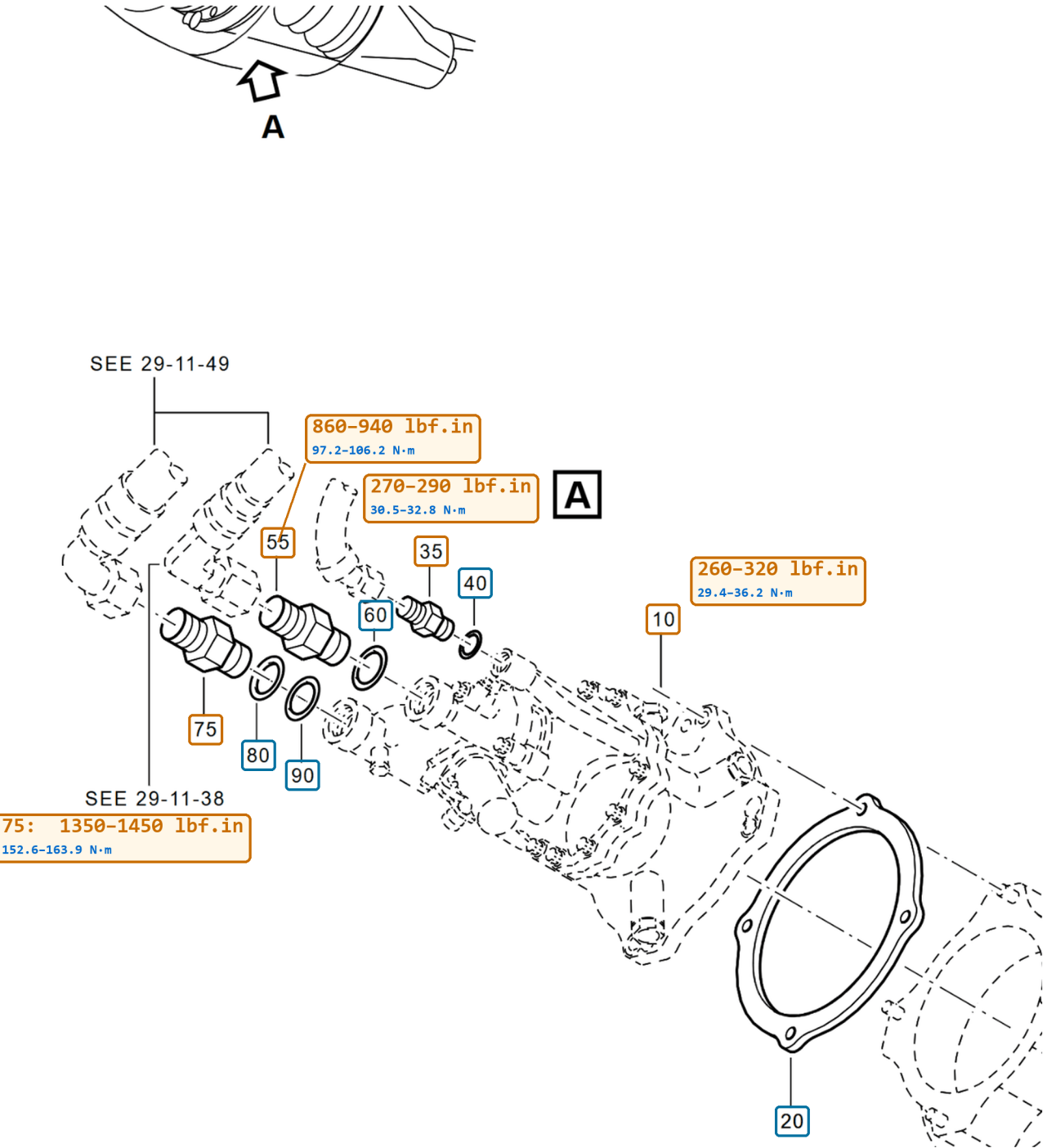


ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	Dust cap	ØMP2505-6	
20	Coupling half	ØMP2505-2	
30	Packing, preformed	M83248-1-908	AS3208-08 · M83485-1-908
40	Dust cap	ØMP2506-6	
50	Coupling	ØMP2506-2	
60	Packing, preformed	M83248-1-906	AS3208-06 · M83485-1-906
70	Union	AN815-10J	
80	Packing, preformed	M83248-1-910	AS3208-10 · M83485-1-910
90	Union	AN815-12J	
100	Packing, preformed	M83248-1-912	AS3208-12 · M83485-1-912
110A	IDG (fig 24-21-51-01A)	1706903	1708897 · 772181A

TORQUE SUMMARY	
Union 70	400-425 lbf.in 45.2-48.0 N·m
Union 90	430-455 lbf.in 48.6-51.4 N·m
Oil-in line nut	725-850 lbf.in 81.9-96.1 N·m
Oil-out line nut	700-730 lbf.in 79.1-82.5 N·m
Terminal-block nuts (N, T1-T3)	144-168 lbf.in 16.3-19.0 N·m
Terminal cover screws	20-22 lbf.in 2.3-2.5 N·m
QAD tension bolt	265-305 lbf.in 29.9-34.5 N·m

CFM56-5B · GREEN HYDRAULIC PUMP (EDP, engine 1) · Mount nuts, unions and hoses

IPC 29-11-51-02A and 29-11-51-01A (figures and part numbers) · AMM 29-11-51-400-041-A (torques) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	Nut (4 per pump)	52Z2278-064	Use NEW nuts
20	Gasket	S700M0986	
35	Reducer assy (case drain)	AFP292J6-8A	35A MS21916J8-6 (post SPIB CFM98120MW)
40	Packing	NAS1612-8	
55	Union (suction)	AFP290J20A	55A MS21902J20 (post SPIB CFM98120MW)
60	Packing	NAS1612-20	
75	Reducer (pressure)	RS4932413J12-16	
80	Back-up ring	MS28774-123	
90	Packing	NAS1612-16	90A A991600AA954 (O-ring)
010D	PUMP (fig 29-11-51-01A)	4205401	3031863-001 · 3031863-002 · 4205400 · 623977 · 887673

TORQUE SUMMARY

Mount nuts 10	260-320 lbf.in 29.4-36.2 N·m
Case drain 35	270-290 lbf.in 30.5-32.8 N·m
Suction 55	860-940 lbf.in 97.2-106.2 N·m
Pressure 75	1350-1450 lbf.in 152.6-163.9 N·m
Hose nut, case drain	215-245 lbf.in 24.3-27.7 N·m
Hose nut, suction (x2)	800-900 lbf.in 90.4-101.7 N·m
Hose nut, pressure	900-1000 lbf.in 101.7-113.0 N·m

Pump is full of fluid: do not let hydraulic fluid run out when you connect parts. Same torques for the Eaton (Vickers) and Parker (Abex) pump.

Mount nuts: first a running torque check (min 9.5 lbf.in / 1.1 N-m); if you can turn a nut by hand with no resistance, discard it.

Hose nuts: hold the union with a second wrench while you torque the coupling nut.

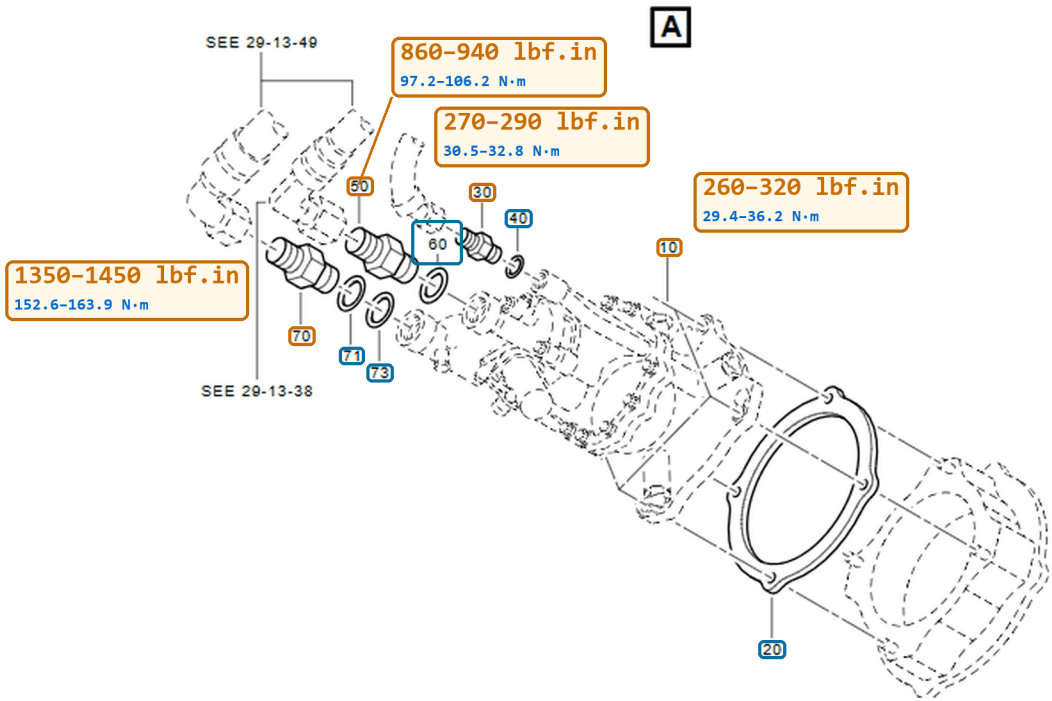
N·m = m.daN × 10 (the AMM gives m.daN). Unions: 35 = AMM union (25) case drain; 55 = AMM union (15) suction; 75 = AMM union/reducer (65) pressure.

Figure 29-11-51-02A (SHEET 1) - Hydraulic system installation CFM56. Pump itself: Figure 29-11-51-01A, item 010D. Hoses: see 29-11-49. Adapter: see 29-11-38.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · YELLOW HYDRAULIC PUMP (EDP, engine 2) · Mount nuts, unions and hoses

IPC 29-13-51-02A and 29-13-51-01A (figures and part numbers) · AMM 29-13-51-400-004-A (torques) · A320 VLG



Pump is full of fluid: do not let hydraulic fluid run out when you connect parts. Same torques for the Vickers and Abex pump.

Mount nuts: first a running torque check (min 9.5 lbf.in / 1.1 N.m); if you can turn a nut by hand with no resistance, discard it.

Hose nuts: hold the union with a second wrench while you torque the coupling nut.

N.m = m.daN × 10 (the AMM gives m.daN). Unions: 30 = AMM union (25) case drain; 50 = AMM union (15) suction; 70 = AMM union/reducer (65) pressure.

Checked in AMM VLG rev 85 (17-10-2026): yellow pressure hose nut 855-945 lbf.in (29-13-51-400-004-A); green is 900-1000 (29-11-51-400-041-A). Both correct, they really differ.

ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	Nut (4 per pump)	52Z2278-064	Use NEW nuts
20	Gasket	S700M0986	
30	Reducer assy (case drain)	AFP292J6-8A	30A MS21916J8-6 (post SPIB CFM98120MW)
40	Packing	NAS1612-8	
50	Union (suction)	AFP290J20A	50A MS21902J20 (post SPIB CFM98120MW)
60	Packing	NAS1612-20	
70	Reducer (pressure)	RS4932413J12-16	70A RS4932413J12-16
71	Back-up ring	MS28774-123	
73	Packing	NAS1612-16	73A A991600AA954 (O-ring)
010D	PUMP (fig 29-13-51-01A)	4205401	3031863-001 · 3031863-002 · 4205400 · 623977

TORQUE SUMMARY

Mount nuts 10	260-320 lbf.in 29.4-36.2 N.m
Case drain 30	270-290 lbf.in 30.5-32.8 N.m
Suction 50	860-940 lbf.in 97.2-106.2 N.m
Pressure 70	1350-1450 lbf.in 152.6-163.9 N.m
Hose nut, case drain	215-245 lbf.in 24.3-27.7 N.m
Hose nut, suction + adapter	800-900 lbf.in 90.4-101.7 N.m
Hose nut, pressure	855-945 lbf.in 96.6-106.8 N.m

AMM 24-21-00-210-043-A and 24-21-51-400-040-E (drawing and torques) · IPC 24-21-41-01A (part number) · A320 VLG



Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

TORQUE SUMMARY

265-305 lbf.in

29.9–34.5 N·m

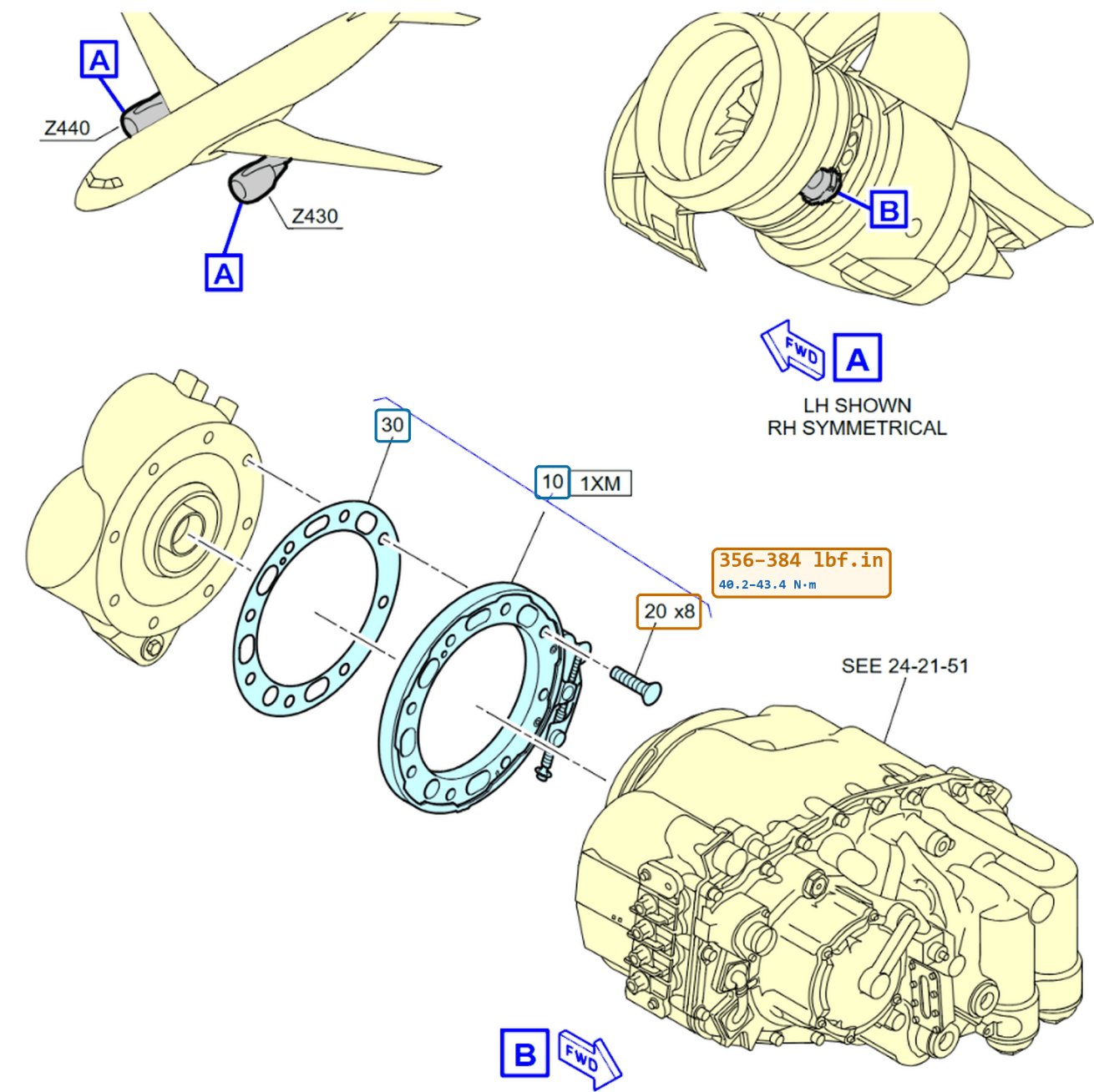
2 lbf.ft max

2.7 N·m

With IDG new EPGS the QAD must be P/N 772896 (replaces 740123). N·m = m.daN × 10.

CFM56-5B · IDG QAD ADAPTER · Screws on the gearbox

IPC 24-21-41-01A (figure and part numbers) · AMM 24-21-41-400-043-A (torque) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10B	QAD adapter (2 per aircraft)	772896	for IDG new EPGS (replaces 740123)
20	Screw (8 per adapter)	0646C624-20	anti-seize on head and threads
30A	Gasket (new each time)	1700182	
110A	IDG (fig 24-21-51-01A)	1706903	1708897 · 772181A

TORQUE SUMMARY

Screws 20 (8 per adapter) **356-384 lbf.in**
40.2-43.4 N·m

Clean the adapter face. Remove the protective backing from the NEW gasket, check it for tears, and align its 8 holes with the 8 holes of the adapter.

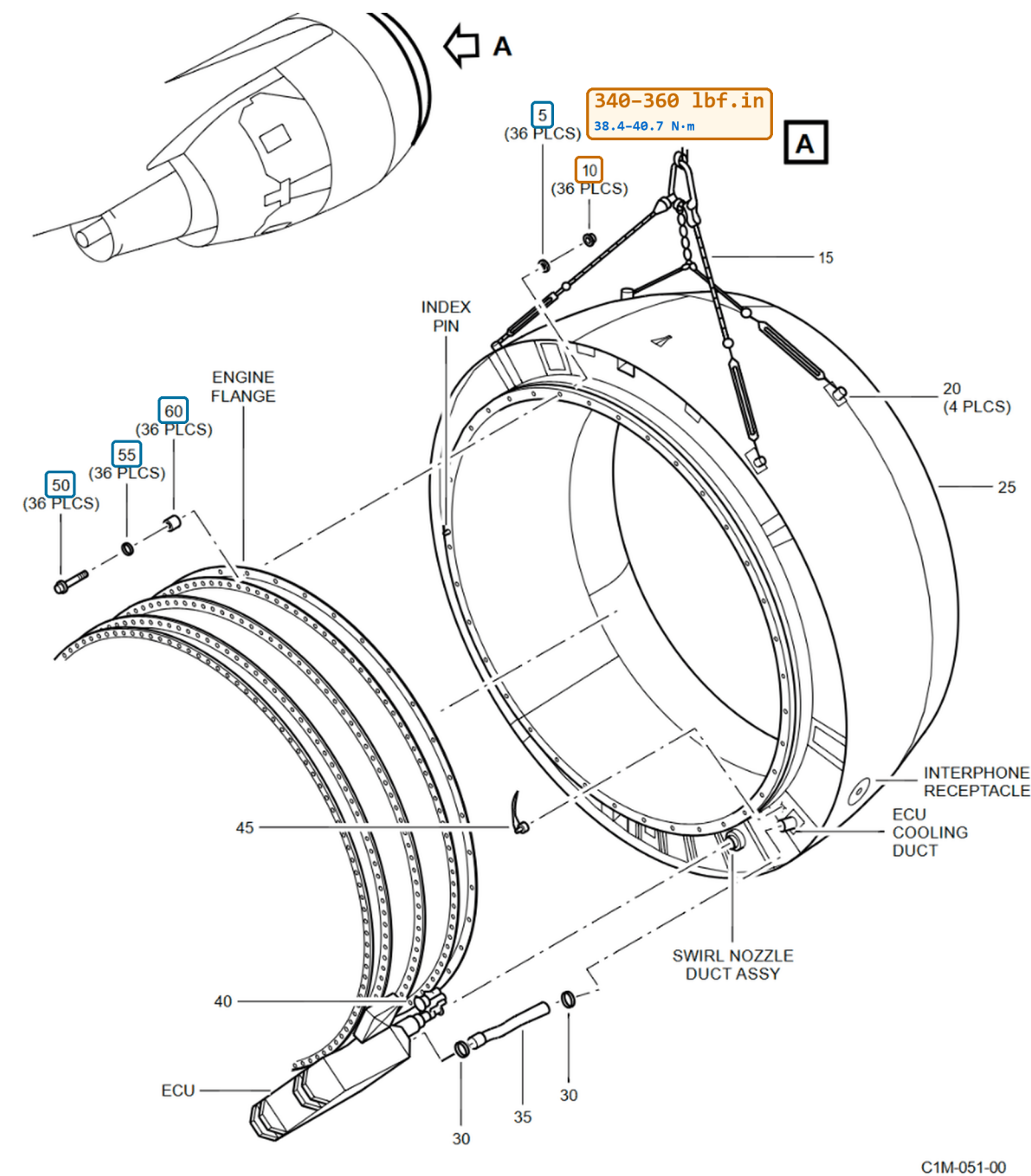
Put the adapter on the gearbox with 'TOP CFM' at the 12 o'clock position.

Apply a thin layer of anti-seize nickel and graphite (03PBD1) to the conical heads and threads of the 8 screws, then torque them.

After this, install the IDG (AMM 24-21-51-400-040).
N·m = m.daN × 10.

CFM56-5B · AIR INTAKE COWL (INLET) · Attach hardware to the fan case

IPC 71-11-11-01A (figure and part numbers) · AMM 71-11-00-400-041-A (torques) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	NUT (36) · IPC 60	80562C624W	torque these
50	Bolt (36) · IPC 30	77711-6-17	PBF1489-6-17 · AIC577-6-17 · head faces AFT
55	Washer (36) · IPC 50	NAS1587-6	countersunk side against bolt head
5	Washer (36) · IPC 40	NAS1587-6C	
60	Spacer (36) · IPC 70	642-1028-501	
25	Air inlet cowl (310 lb / 140.6 kg)	642-1000-501	642-1000-505 (post SB RA32071-126)
15/20	Sling and attach pads (4)	tooling	remove after bolting

TORQUE SUMMARY

Nuts 10 (x36)

340-360 lbf.in
38.4-40.7 N.m

Hoist insert bolts

60-70 lbf.in
6.8-7.9 N.m

36 places. Cowl weighs 140.6 kg: use the sling. Engage the INDEX PIN with the engine flange first.

Bolts go through the engine flange, head facing AFT. Torque nuts starting at 9 and 3 o'clock, then follow the torque sequence chart (AMM fig 71-11-00-991-30100), and torque again in the same sequence.

Hoist insert bolts: 60-70 lbf.in (6.8-7.9 N-m).

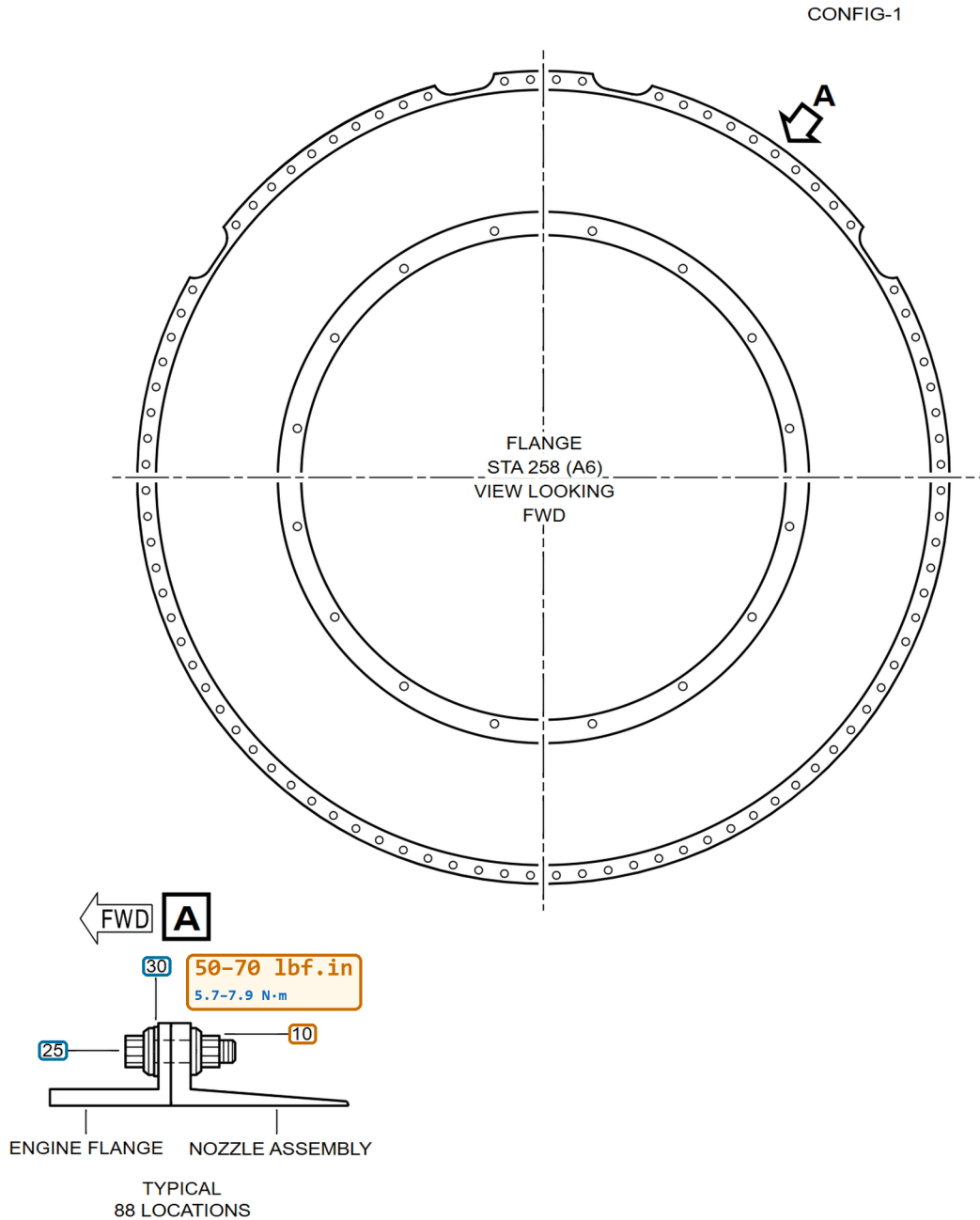
New cowl: adjust the fan cowl doors, or they can open in flight. N.m = m.daN × 10.

Figure 71-11-00-991-30000-06-A (SHEET 1) - Air Intake Cowl (AMM 71-11-00-400-041-A). Numbers are AMM item numbers; IPC numbers in the table. Torque sequence chart: AMM fig 71-11-00-991-30100.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · CORE NOZZLE (exhaust) · Flange bolts and nuts

AMM 78-11-11-400-041-A, Config 1 (-5BX/P and -5BX/3) · IPC 78-11-11-01B (part numbers) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
5	Core nozzle assembly (73.5 kg)	see IPC 100/100A/100B	238-0401-501 · 642-4001-501 · 642-4612-501 chevron (post SB RA32078-117)
25	Bolt (88 places)	77458-4-4	77710-4-4 · VCC0204-4-4 · 275B0204-6 (IPC 110/120, depends on SPIB)
30	Washer (88 places)	S700W0501	IPC 130/140/150
10	NUT (88 places)	check IPC 78-11-11-01B	torque these; bracket nuts: VN324B048 (IPC 10)
15	Bracket (flange holes 44 and 45, bottom)	see IPC	2 bolts, 2 washers, 2 nuts

TORQUE SUMMARY

Nuts 10 (x88)

50-70 lbf.in
5.7-7.9 N·m

Core nozzle weighs about 73.5 kg: support it safely and keep it away from other engine parts.

Install all bolts, washers and nuts finger tight (bracket 15 at holes 44 and 45 included), then fit the TRF drain tube and adjust the nozzle position for the best exhaust gas flow path.

Then torque the nuts 50-70 lbf.in. Start at 3 and 9 o'clock, then go on opposite sides of the engine.

Part numbers of bolts and nuts change with SPIB/SB: check the IPC variant before ordering. N·m = m.daN × 10.

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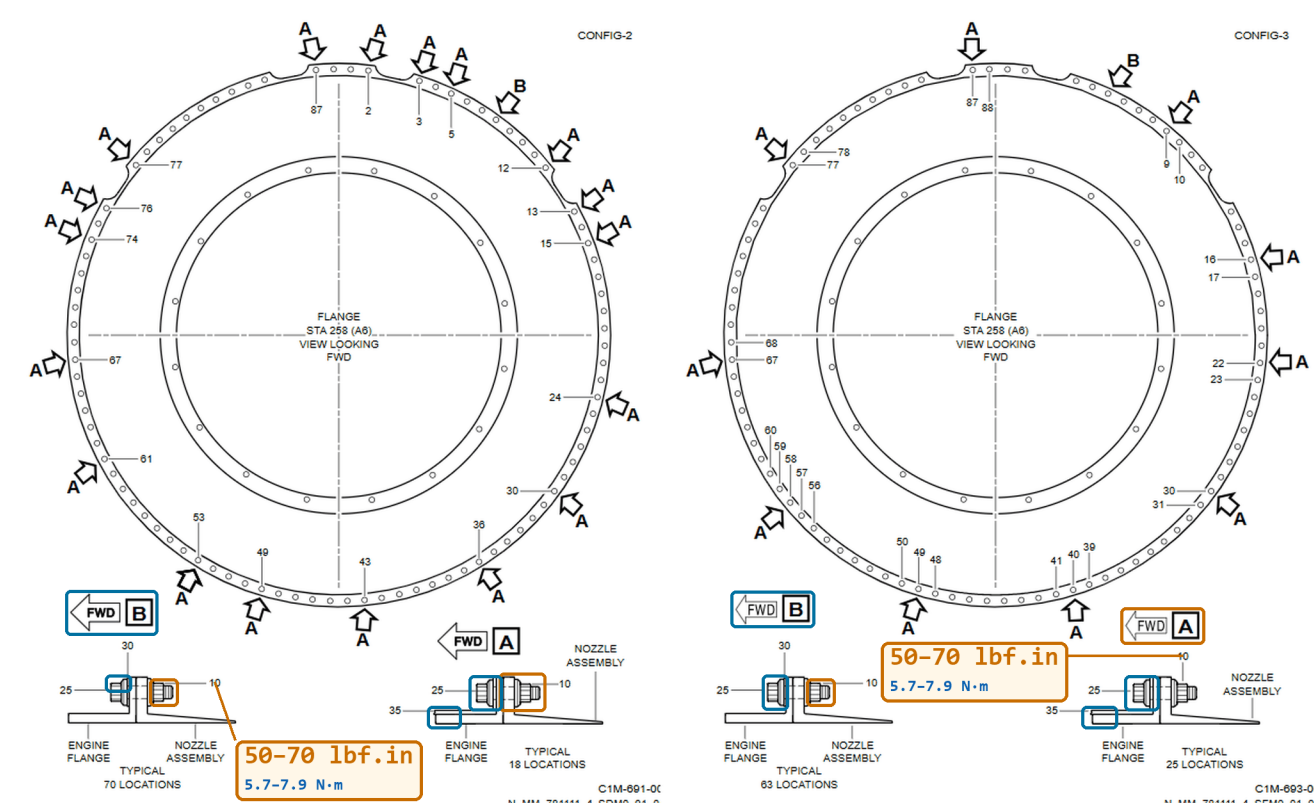
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Figure 78-11-11-991-91100-06-A (SHEET 1/1) - Parts that attach the core nozzle assembly, Config 1. Numbers are AMM item numbers. Config 2 and Config 3 (other engine variants) have their own figures.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · CORE NOZZLE (exhaust) · Config 2 and Config 3

AMM 78-11-11-400-041-A, Config 2 (-5BX) and Config 3 (-5BX/2P) · IPC 78-11-11-01B (part numbers) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
5	Core nozzle assembly (73.5 kg)	see IPC 100/100A/100B	238-0401-501 · 642-4001-501 · 642-4612-501 chevron (post SB RA32078-117)
25	Bolt (88 places)	77458-4-4	77710-4-4 · VCC0204-4-4 · 275B0204-6 (IPC 110/120, depends on SPIB)
30	Washer (88 places)	S700W0501	IPC 130/140/150/160. Countersunk side against the bolt head
35	Support: 18 places (Config 2) / 25 places (Config 3)	TO CHECK	Not listed in IPC 78-11-11-01B for MSN 02798 (Config 1 engine). Look it up in the CFM56 engine IPC / IPC of the engine you fit
10	NUT (88 places)	VN324B048	IPC 010/170. Torque these
15	Bracket (flange holes 44 and 45, bottom)	238-0825-503	IPC 070 (bracket assy). 2 bolts, 2 washers, 2 nuts

TORQUE SUMMARY

Nuts 10 (x88)

50-70 lbf.in
5.7-7.9 N.m

Supports 35 · Config 2

18 places

Supports 35 · Config 3

25 places

CONFIG 2 (-5BX): 18 supports (35) at flange holes 2, 3, 5, 12, 13, 15, 24, 30, 36, 43, 49, 53, 61, 67, 74, 76, 77, 87. Bracket (15) at holes 44-45. The other 68 holes: bolt, washer, nut.

CONFIG 3 (-5BX/2P): 25 supports (35) at holes 9, 10, 16, 17, 22, 23, 30, 31, 39, 40, 41, 48, 49, 50, 56, 57, 58, 59, 60, 67, 68, 77, 78, 87, 88. Bracket (15) at holes 44-45. The other 61 holes: bolt, washer, nut.

Order: nickel never-seez CP2619 on the bolt threads. Everything finger tight (supports, bracket, rest), fit the TRF drain tube, align the nozzle for the best gas flow path. Then torque the nuts 50-70 lbf.in, starting at 3 and 9 o'clock, then opposite sides.

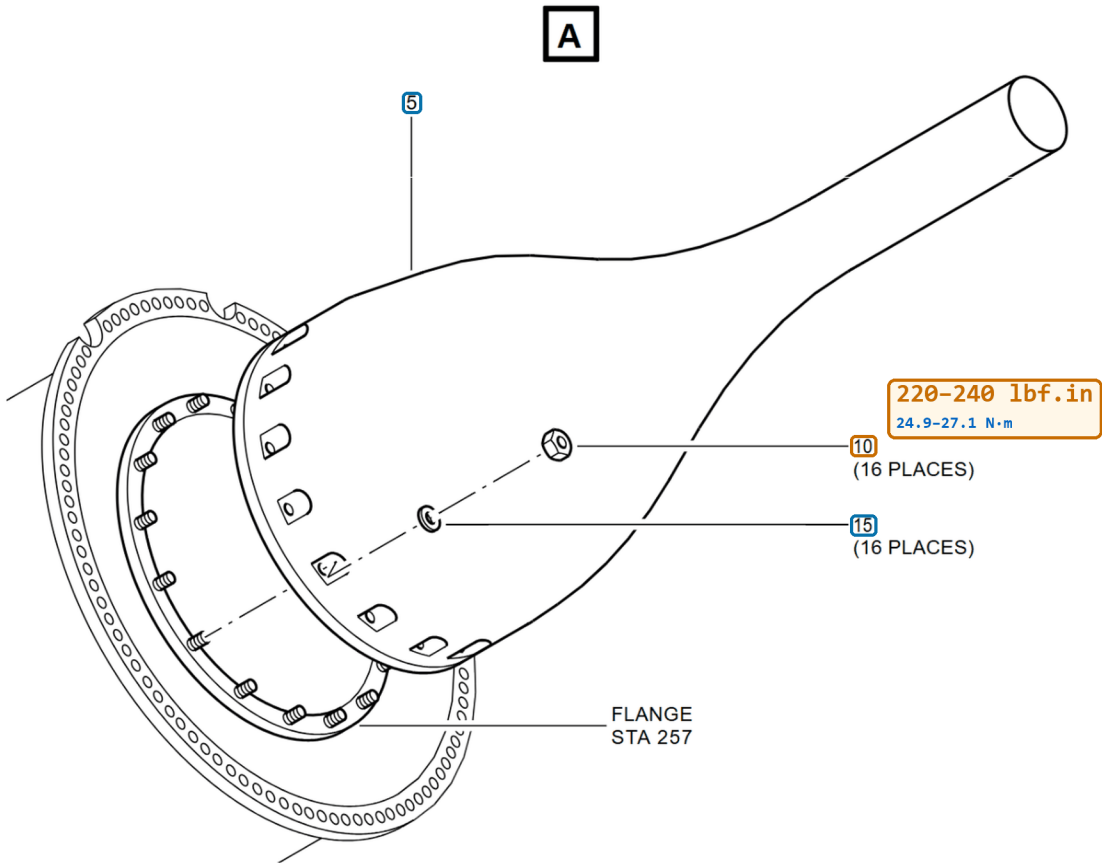
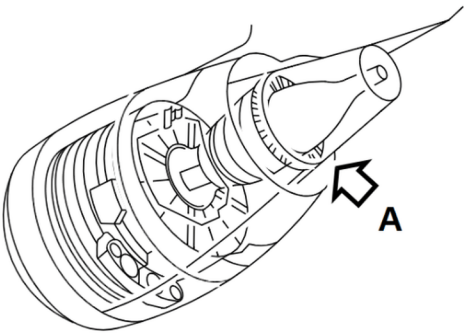
Nozzle weighs about 73.5 kg: support it safely. GSE: fixture RSE1130; sling RSE1133 or 642GSE4001-901. Config 1 (-5BX/P, -5BX/3) is on the other sheet. N.m = m.daN × 10.

Figures 78-11-11-991-91300-06-A (Config 2, left) and 78-11-11-991-91500-06-A (Config 3, right) - Parts that attach the Core Nozzle Assembly. Flange STA 258 (A6), view looking forward. Numbers are AMM item numbers.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · CENTERBODY (exhaust plug) · Nuts on the engine flange

AMM 78-11-12-400-041-A (torque) · IPC 78-11-12-01A (part numbers) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	NUT (16 per centerbody) · IPC 010	VN405W064	BH00184-6 · H19083-6 · always NEW nuts
15	Washer (16) · IPC 020	VN936NP6	AS4987NP6 · NS202139-6 · RA82089-6
5	Centerbody assy · IPC 030	238-0451-511	-513 post SB RA32178-4 · -523 post SPIB CFM02188MW1 (more variants in IPC)

TORQUE SUMMARY

Nuts 10 (x16)

220-240 lbf.in

24.9-27.1 N·m

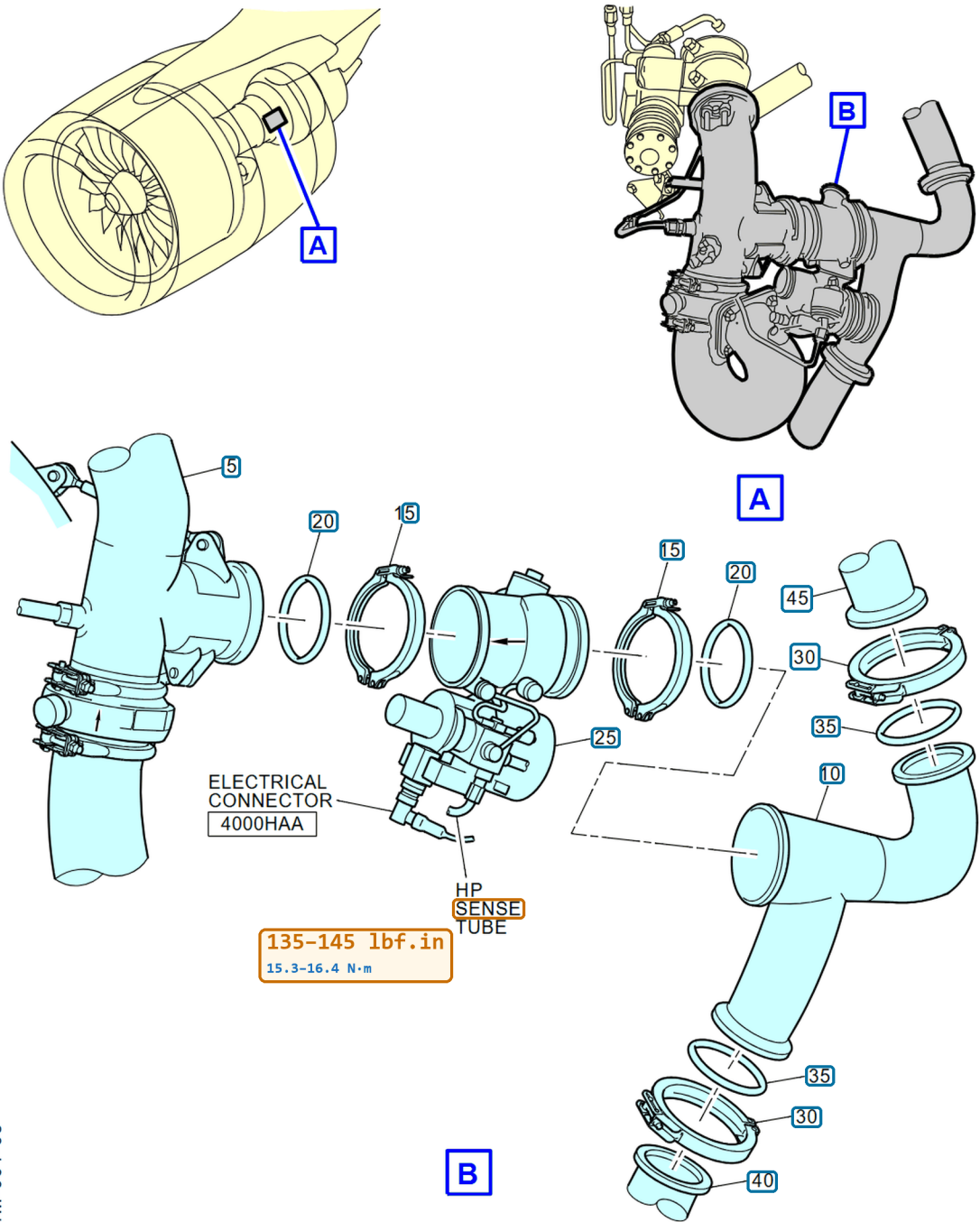
Check that the centerbody has TWO rows of drain holes. If not, see SB RA32178-4.

Put the centerbody on the studs of the engine flange (STA 257). Put Never-Seez pure nickel (CP2619) on the stud threads.

Fit NEW nuts and washers (16). Never reuse nuts. Torque the nuts 220-240 lbf.in. N·m = m.daN × 10.

CFM56-5B · HP BLEED VALVE (HPV) · Couplings and sense tube

AMM 36-11-51-400-042-A (torque) · IPC 36-11-51-02 (part numbers) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
25	HP bleed valve (HPV)	70645A020001	70645A030001 (IPC 36-11-51-20F, -001M) · FIN 4000HA · flow arrow towards the duct (5)
15	COUPLING (x4) · IPC 015	30499-400	30680-400 (post SPIB CFM95086PJ1)
20	E-SEAL (x4) · IPC 025	8757-400	13226-400 (post SB SPIB CFM96349MW1)
35	E-seal of duct 10/40/45	IPC 36-11-49-01 item 160	other figure
5/10	Ducts	IPC 36-11-49	other figure

TORQUE SUMMARY

HP sense tube fitting

135-145 lbf.in
15.3-16.4 N.m

Couplings 15 and 30

value on face
50% / 100% / 100%

Couplings 15 and 30 have NO fixed number: the torque is the value WRITTEN ON THE FACE of each coupling.

Order: tighten to 50 percent of that value, tap the coupling with a plastic mallet, torque to 100 percent, tap again, torque to 100 percent again. Threaded part of coupling 15 at the top, of coupling 30 pointing forward; hinge and nut NOT on the cowl side.

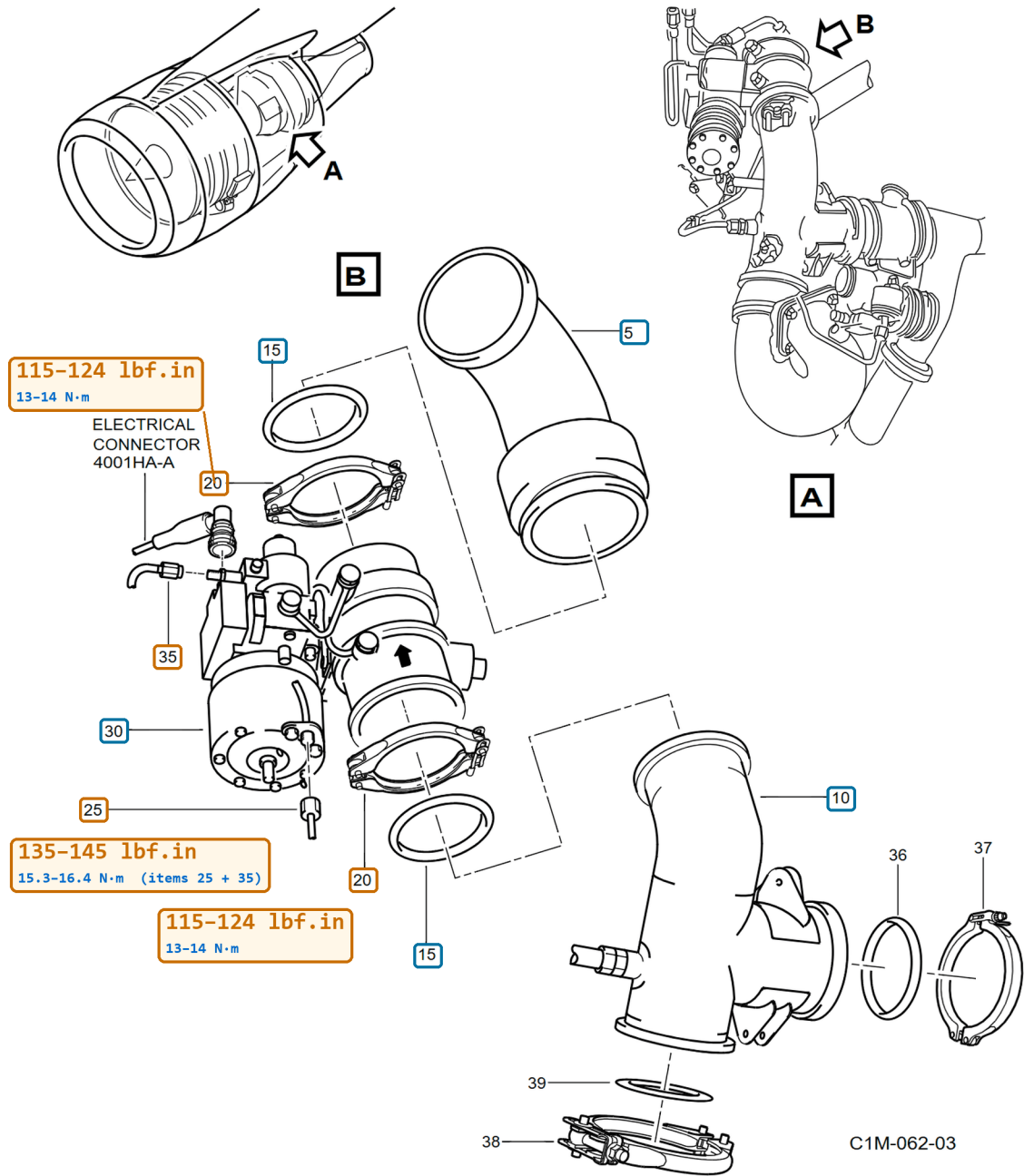
Keyway of the valve must engage the key on the duct. Clean the E-seals, use new ones if damaged. Thin layer of silicone lubricant CP5063 on the sense tube fitting threads only.

N.m = m.daN × 10 (the AMM gives m.daN).

C1M-061-03

CFM56-5B · BLEED PRESSURE REGULATING VALVE (PRV) · Couplings and sense lines

AMM 36-11-52-400-042-A (torque) · IPC 36-11-52-02 and 36-11-52-90 (part numbers) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
30	Bleed PRV	70646A010001	IPC 36-11-52-90 · FIN 4001HA · flow arrow towards the duct (5)
20	COUPLING (x2) · IPC 020	30499-400	30680-400 (post SPIB CFM95086PJ1)
15	E-SEAL (x2) · IPC 040	8757-400	13226-400 (post SB SPIB CFM96349MW1)
25/35	Sense lines to the PRV	TO CHECK	not in A320 IPC 36-11-52 · union nuts: hold the union with a 2nd wrench
5/10	Interface duct (5) and mid-stage tee duct (10)	IPC 36-11-49	other figure

TORQUE SUMMARY

Sense lines 25 and 35

135-145 lbf.in
15.3-16.4 N.m

Couplings 20

115-124 lbf.in
13-14 N.m

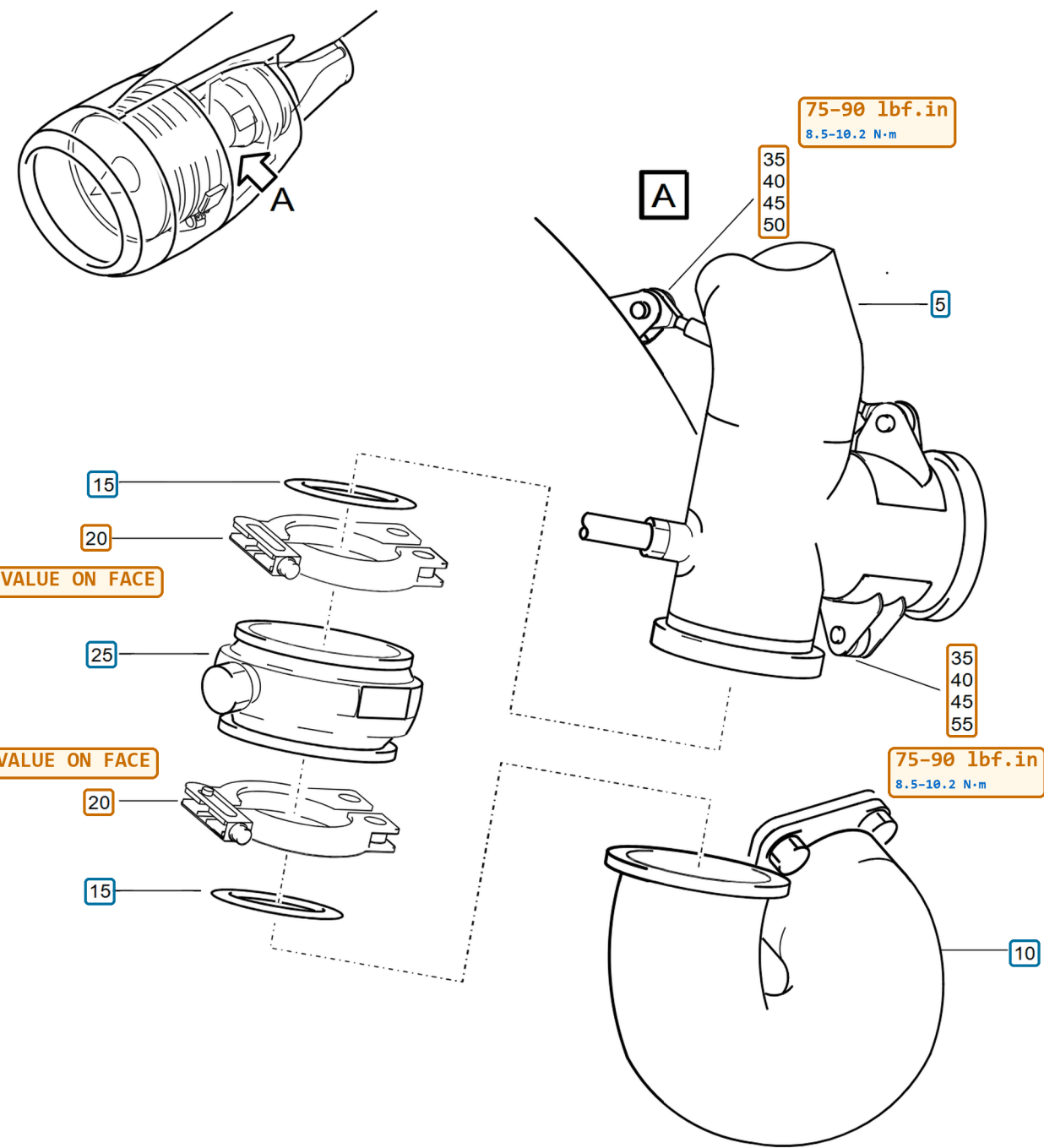
Couplings 20: tighten to 115-124 lbf.in, tap the edges with a fibre hammer, tighten again, repeat the tap + torque two more times. Hinge and nut NOT on the cowl side.

Keyway of the valve must engage the key on the duct; flow arrow towards the interface duct (5). Check the IPT/RPT plug is in selector position S-A. Thin layer of silicone CP5063 on thread of nuts only.

Use TWO wrenches on the sense line unions (countertorque). N.m = m.daN × 10.

CFM56-5B · IP BLEED CHECK VALVE · Link nuts and couplings

AMM 36-11-41-400-040-A (torque) · IPC 36-11-41-01 and 36-11-41-02 (part numbers) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
25	IP bleed check valve	2293A010000	2293B010000 · 2293B020000 (IPC item 030E, MSN 02798) · IPC 36-11-41-01 · flow arrow towards the mid-stage tee duct (5), inboard side, pointing up
20	COUPLING (x2) · IPC 015	30499-400	30680-400 (post SPIB CFM95086PJ1)
15	E-SEAL (x2) · IPC 025	8757-400	13226-400 (post SB SPIB CFM96349MW1)
35-45	Nut / washer / bolt of the links	TO CHECK	not in A320 IPC 36-11-41-01/02 · countersunk side of the washer against the bolt head
50/55	Links to the tee duct	TO CHECK	not in A320 IPC 36-11-41-01/02 · 2 links
5/10	Mid-stage tee duct (5) and 5th stage elbow duct (10)	IPC 36-11-49	other figure

TORQUE SUMMARY

Link nuts 35

75-90 lbf.in
8.5-10.2 N·m

Couplings 20

value on face
tap + torque x2

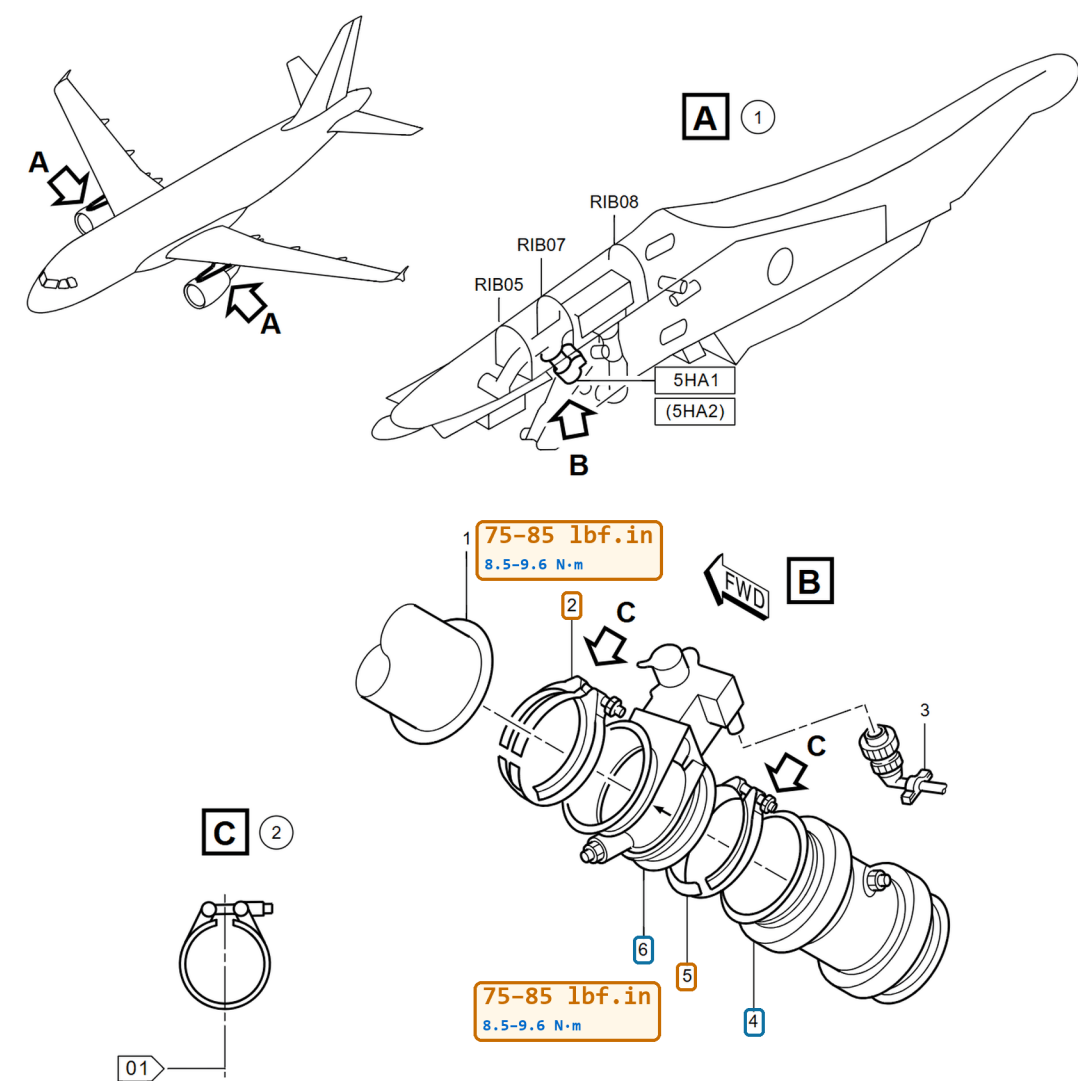
Link nuts 35: 75-90 lbf.in (0.85-1.02 m.daN). Attach the links (50, 55) to the tee duct with the nuts left loose; torque them later in the procedure.

Couplings 20: torque the nuts to the value written on the coupling, tap the edges with a fibre hammer, torque again; do the tap + torque procedure twice. Locking screws of the coupling at 9 o'clock looking in the flow direction.

Keyway of the valve must engage the key on the duct. N·m = m.daN × 10.

CFM56-5B · OVERPRESSURE VALVE (OPV) · Clamps

AMM 36-11-53-400-001-A (torque) · IPC 36-11-86-11A (part number) · A320 VLG



NOTE:

- 1 EXAMPLE
- 2 CORRECT ORIENTATION OF THE CLAMP IN THE PYLON AXIS
- 01 PYLON AXIS

N_MM_361153_4_AAM0_01_01

Figure 36-11-53-991-00100-00-A (SHEET 1/1) - Overpressure Valve. Numbers are AMM item numbers.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
6	Overpressure valve (OPV)	70647A010001	IPC 36-11-86-11A · FIN 5HA1 (eng 1) / 5HA2 (eng 2) · flow arrow pointing UP, control mechanism to the REAR
2/5	Clamps	TO CHECK	not in A320 IPC 36-11-86 / 36-11-53 (valve only) · check orientation (view C): screws must not touch the firewall of the thrust reverser cowl
4	Pneumatic line / duct	IPC 36-11-49	other figure

TORQUE SUMMARY

Clamps 2 and 5

75-85 lbf.in
8.5-9.6 N.m

Clamps 2 and 5: 75-85 lbf.in (0.85-0.96 m.daN), method as in AMM TASK 70-23-00-910-801.

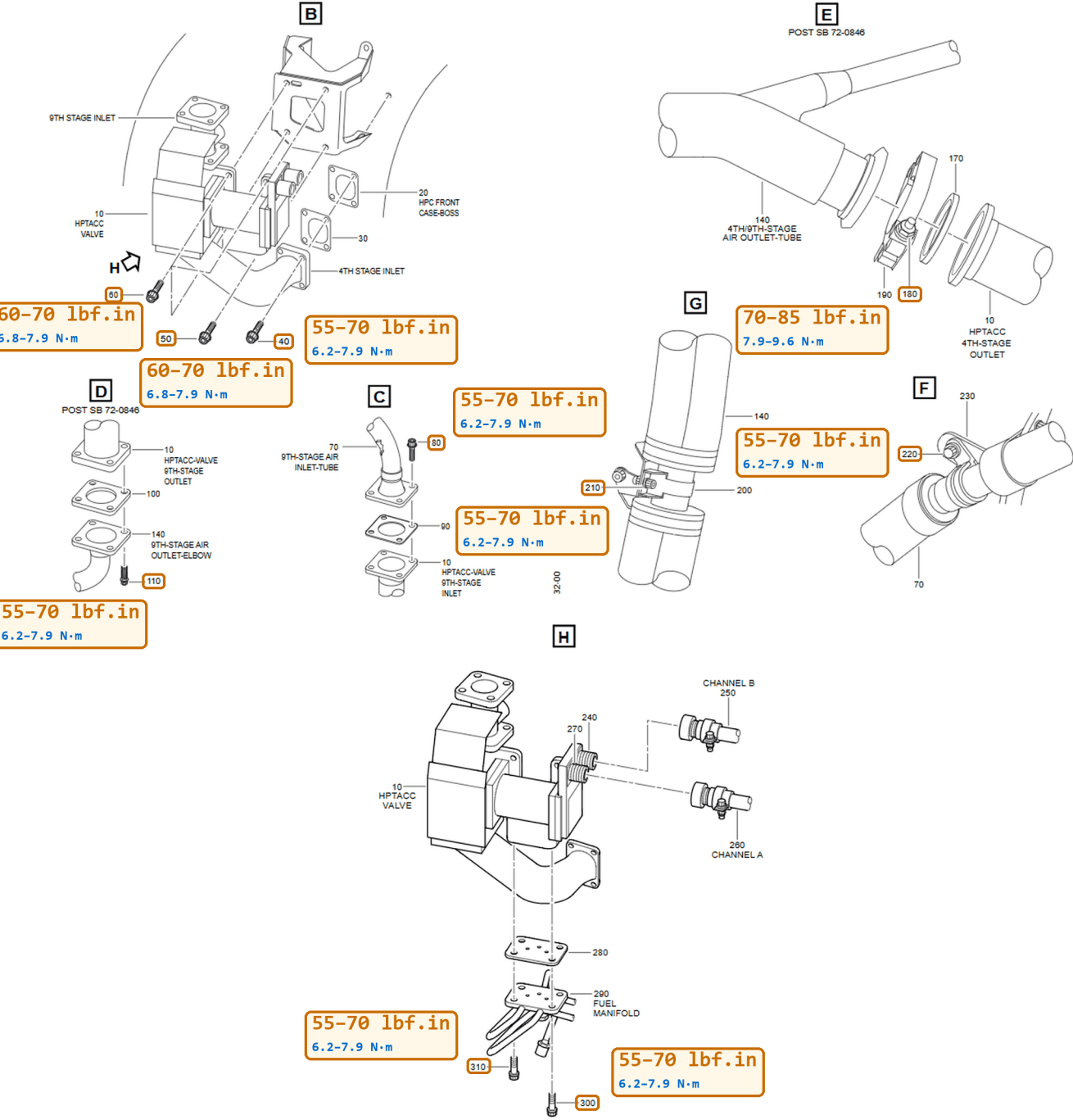
Fit the valve on the pneumatic line (4) with the control mechanism to the rear and the airflow arrow pointing up. The clamp screws must be in the position of view C, otherwise they can damage the firewall of the thrust reverser cowl.

Use TWO wrenches (countertorque) on the union when you connect the sense line. N.m = m.daN × 10.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · HPTACC VALVE · High pressure turbine clearance control

AMM 75-21-10-400-002-A (torque) · IPC 75-21-10-01B (part number) · A320 VLG · post SB 72-0846 layout



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
160	HPTACC valve	326635-2	326635-1 / -3 / -4 · 329695-3 to -8 and later (by SB 75-0031 / 0042 / 0052) · IPC item 160 series
100	Orifice plate	1605M22P03	IPC item 100
105	9th stage air tube (HPT)	1645M31G03	IPC item 105
120	Metal seal	1444M95P07	1444M95P05 · IPC item 120
110	Clamp	9911M42P10	IPC item 110
020	Metal gaskets	1467M53P01	9375M33P01 (060) · 9375M33P02 (090) · 1324M88P03 (150)
040	Bolts (6)	J644P12A	IPC item 040
050	Bolts (16)	J644P08C	IPC item 050
080	Bolts (pre SB 72-0846)	J644P12C	IPC item 080
135	Bolts	J644P09A	IPC items 135 / 140

TORQUE SUMMARY	
Bolts 40, 80, 110	55-70 lbf.in 6.2-7.9 N·m
Bolts 50 and 60	60-70 lbf.in 6.8-7.9 N·m
Strap / loop clamp bolts 210, 220	55-70 lbf.in 6.2-7.9 N·m
Fuel manifold bolts 300, 310	55-70 lbf.in 6.2-7.9 N·m
V-band clamp nut 180	70-85 lbf.in 7.9-9.6 N·m

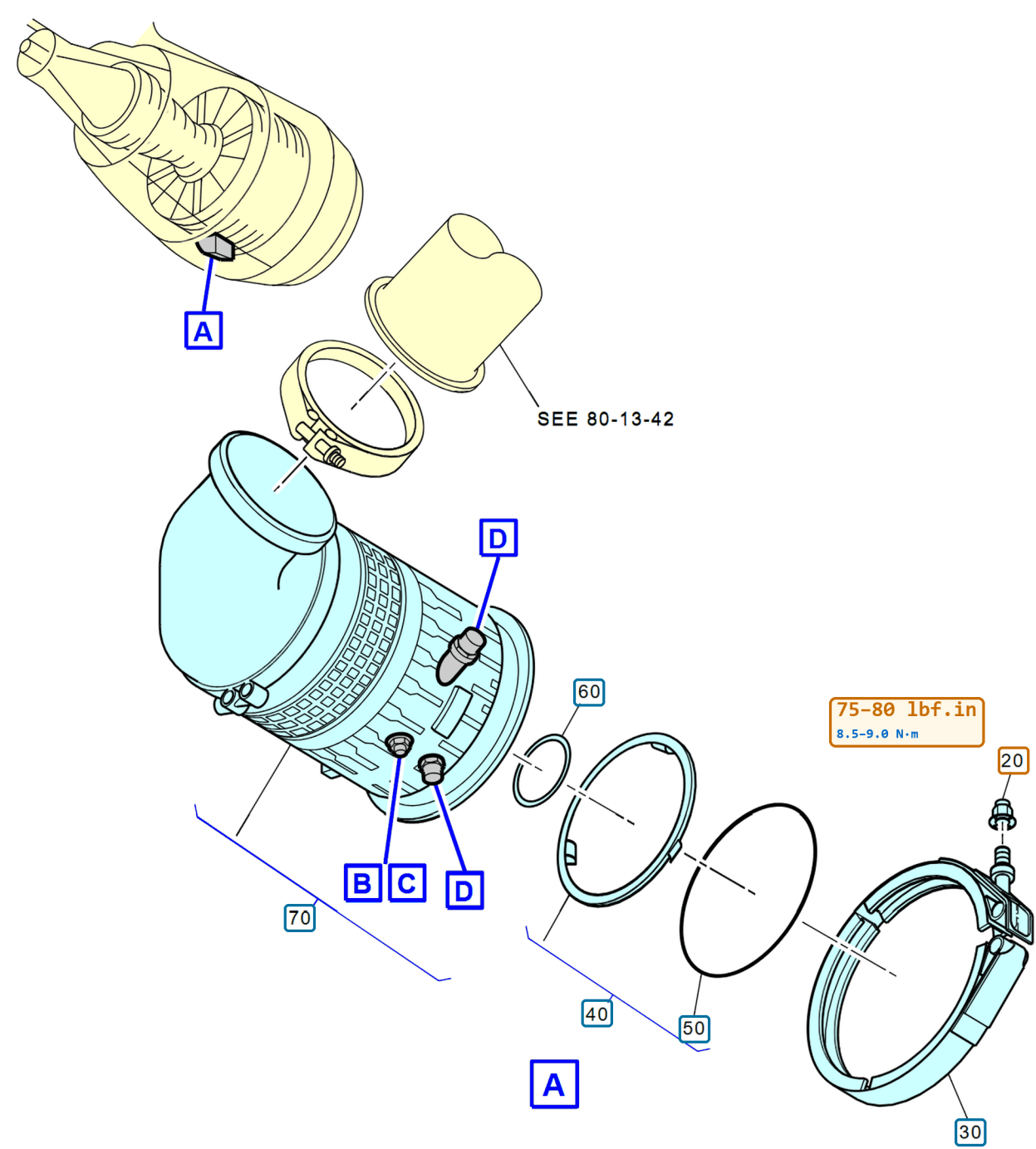
IPC item numbers are NOT the AMM numbers of the drawing: match each part by its picture in IPC 75-21-10-01B. Bolt P/Ns also change with SB 72-0010 / 75-0050 / 72-0942.

Lubricate the threads of bolts 40 with graphite mineral vaseline (CP2101) and fit lockwire 0.8 mm. Also 55-70 lbf.in: bolts 160 (outlet side of the 9th-stage elbow) and bolts 80 / 110 on the old (pre SB 72-0846) layout.

Use new gaskets and seals every time.

CFM56-5B · STARTER (AIR) · Clamp nuts

AMM 80-11-10-400-002-A (torque) · IPC 80-11-10-01B (part number) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
20	Nut (x2)	J626P05	on the starter V-clamp · thread with graphite vaseline CP2101
30	V-clamp, starter (x2)	305-151-403-0	
40	Support, preformed packing (x2)	9057M50P01	
50	Preformed packing (O-ring)	1338M79P01	post SB 72-0094 · always NEW
60	Packing	649-393-222-0	alt 60A J221P222 (post SB 72-0133)
70	Starter, air (x2 per aircraft)	3505582-63 / -64 / -65	post SB 80-0011 · -27 post SB 80-0013 · -28 post SB 80-0020 · older -12/-14/-15/-60/-61/-62 (NP)

TORQUE SUMMARY

Starter clamp nut (20)

75-80 lbf.in
8.5-9.0 N.m

Air duct V-clamp

70-80 lbf.in
7.9-9.0 N.m

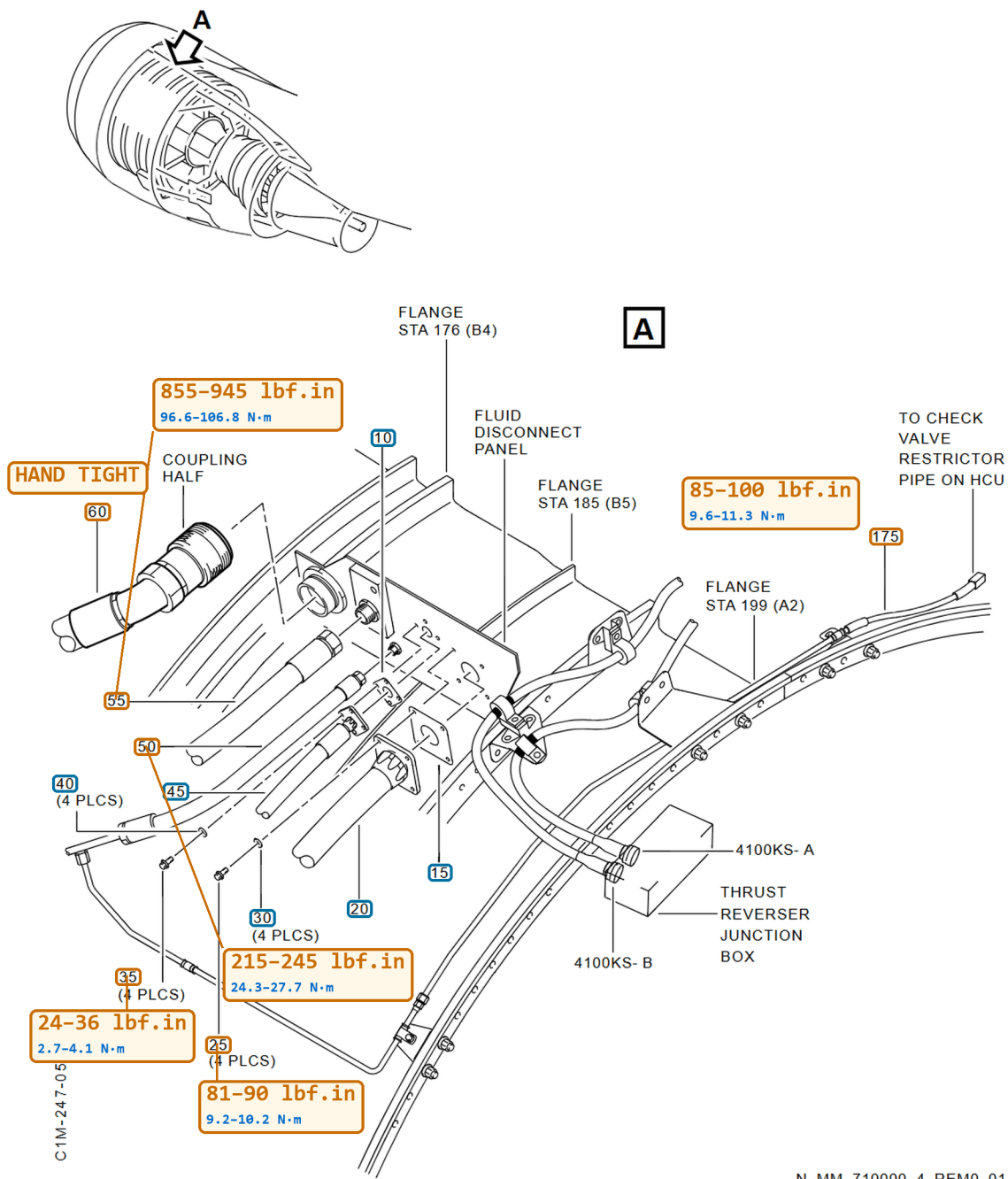
Starter V-clamp nut (item 20): 75-80 lbf.in (0.85-0.90 m.daN). Thread with graphite vaseline CP2101.

Air duct V-clamp (see AMM 80-13-42): 70-80 lbf.in (0.79-0.90 m.daN). Make sure the ducts are correctly connected before you torque the couplings.

Lubricate the seal ring and O-ring with engine oil CP2442. NEVER fit the starter without its seals (oil leak, engine failure). N-m = m.daN × 10.

CFM56-5B · PYLON FLUID DISCONNECT PANEL · Fuel and hydraulic hoses (left side)

IPC 73-11-11-01A, 73-11-48-01A, 29-11-49 (part numbers) · AMM 71-00-00-400-042-A (torques) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	Seal (fuel return hose flange)	718115-08	IPC 73-11-48-01 item 030 · NEW
15	Gasket (main fuel supply flange)	MS27196-24	IPC 73-11-11-01 item 070 · NEW
20	Main fuel supply hose	AE707422-3	AE707422-2 (post RA32073-5) · AE707422-1 (pre RA32073-5)
25	Bolt (x4) + safetywire	MS9566-15	matched by quantity, check IPC 73-11-11-01 item 050
30	Washer (x4)	AN960C416L	
35	Bolt (x4) + safetywire	MS9565-13	IPC 73-11-48-01 item 010
40	Washer (x4)	AN960C10L	
45	Fuel return / by-pass hose	AE709461-1	
50	Upper case drain hose	see IPC	IPC 29-11-49
55	Hydraulic pressure hose	see IPC	IPC 29-11-49
60	Suction hose coupling half	see IPC	IPC 29-11-49
175	Hose/tube to HCU check valve restrictor	see IPC	IPC 29-11-49

TORQUE SUMMARY

Bolts 25 (main fuel)	81-90 lbf.in 9.2-10.2 N.m
Bolts 35 (fuel return)	24-36 lbf.in 2.7-4.1 N.m
Case drain hose 50	215-245 lbf.in 24.3-27.7 N.m
Pressure hose 55	855-945 lbf.in 96.6-106.8 N.m
HCU hose 175	85-100 lbf.in 9.6-11.3 N.m
Suction hose 60	HAND TIGHT

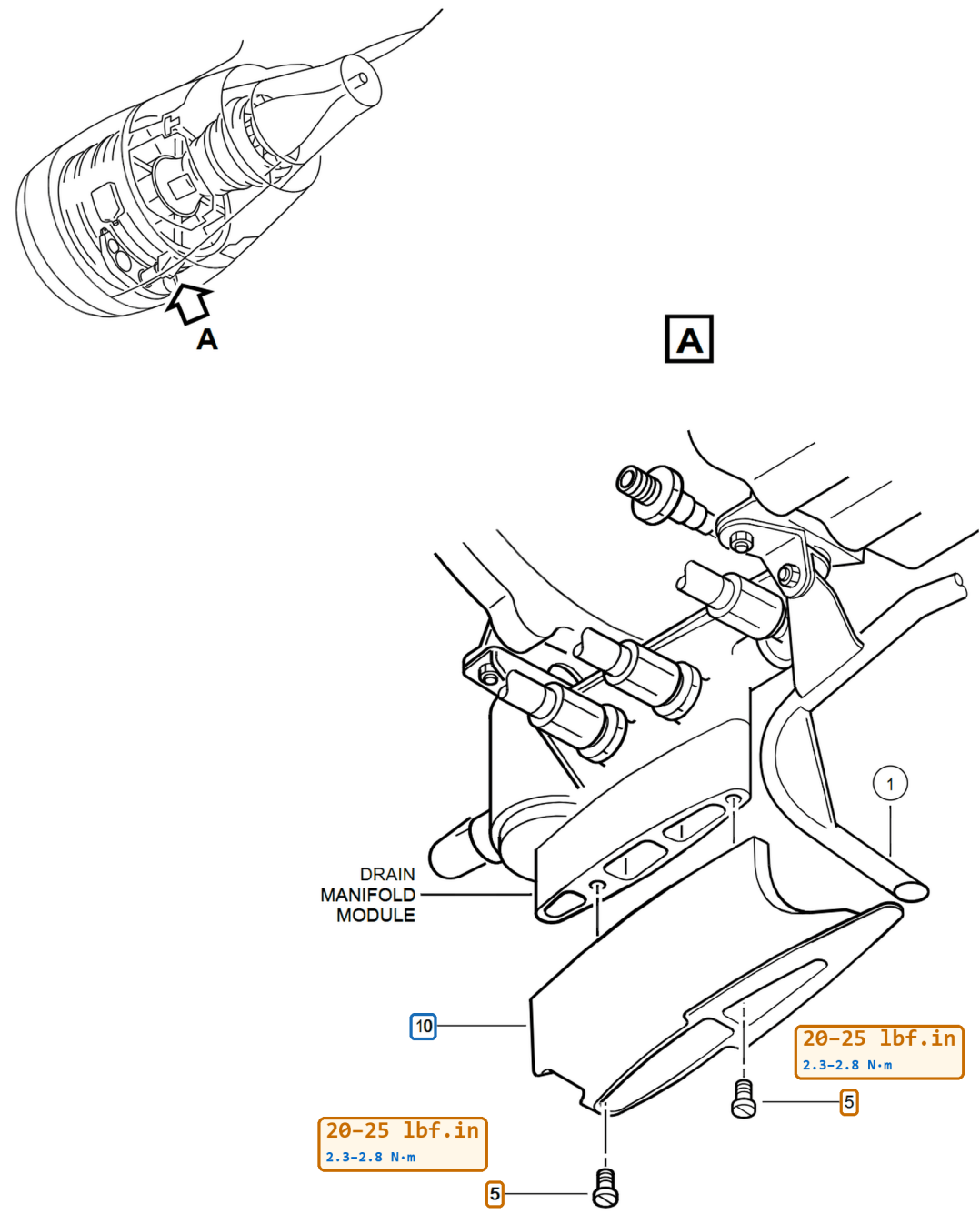
Same panel, same figure: upper case drain 17.92-20.41 lbf.ft = 215-245 lbf.in; pressure hose 71.25-78.75 lbf.ft = 855-945 lbf.in.

Use TWO wrenches on tube coupling nuts. Install NEW gaskets 10 and 15, then safetywire the bolts (CP8001 / CP8002, 0.8 mm).

Pneumatic items at the pylon (AMM same task, fig Pneumatic System): sense tubes 135-145 and 170-190 lbf.in; hose coupling 11.06-12.54 lbf.ft; pylon duct coupling = value marked on the coupling (hit with fiber hammer, torque again x2).

CFM56-5B · DRAIN MAST (MASTER DRAIN) · Screws and manifold

AMM 71-71-42-400-041-A + 71-71-43-400-041-A (torque) · IPC 71-71-43-01C (part number) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
50	Screw (x4 per aircraft)	MS51957-45	drain mast to manifold module - 20-25 lbf.in
60	Mast, drain (x2 per aircraft)	238-0808-507	frangible mast · post SB RA32071-21 see IPC 71-71-42-01A (not illustrated)
40 / 40A	Manifold, drain module (x2)	238-0802-503	see 71-71-41-05 for details
10	Nut (x6)	NAS1805-3P	manifold to engine brackets - 20-25 lbf.in
20	Washer (x6)	AN960C10L	
30	Bolt (x6)	MS9556-07	

TORQUE SUMMARY

Drain mast screws (5)

20-25 lbf.in

2.3-2.8 N·m

Manifold module nuts

20-25 lbf.in

2.3-2.8 N·m

Drain tube coupling nuts (x6)

300-315 lbf.in

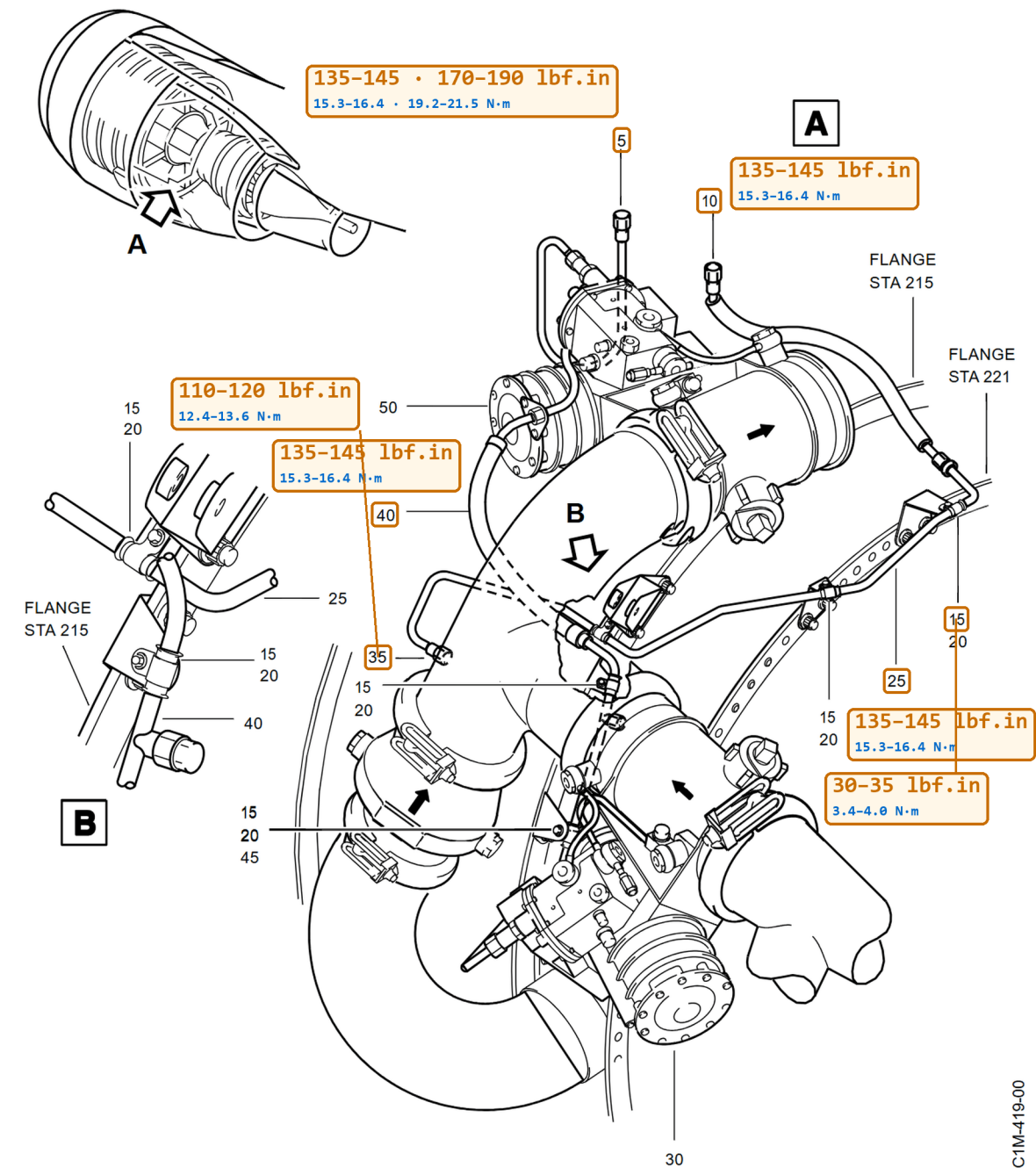
33.9-35.6 N·m

Mast screws (AMM 5) and manifold nuts: 20-25 lbf.in. Tube coupling nuts (x6): 300-315 lbf.in; hold the fitting with a second wrench.

IPC item numbers differ from the AMM (IPC 50 = AMM 5, IPC 60 = AMM 10). To check against the IPC. N·m = m.daN × 10.

CFM56-5B · PYLON BLEED FLANGES · Pneumatic tubes andhoses

AMM 36-11-49-400-047-A + 71-00-00-400-042-A (torque) · IPC 36-11-49-02B (part number) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
100	Hose assy (x2)	110560-17	100A 1-1-09-0786 post SPIB CFM12285RM1 (pre = 110560-17)
120	Tube assy (x2)	642-5515-507	
130	Hose assy (x2)	110551-503	130A 1-1-09-0785 post SPIB CFM12285RM1
150	Tube assy (x2)	642-5515-509	pre SB RA32036-9
070/075	Clamp assy (x6 / x2)	C10GT3-04	clamps (20) of the AMM
020/025	Bolt (x6 / x2)	MS9556-06	nut 050 NAS1805-3P (x2)
160/170	Bolt (x4) / nut (x4)	MS9557-09 / NAS1805-4P	nut opt. NAS1726C4S
180	Bracket (x2)	238-0914-503	
-	Union (35), PRV-HPV tube (40), PRV hose (5)	TO CHECK	Not listed with P/N in the A320 IPC 36-11-49-02/02B/02C, 36-11-51-02 or 36-11-52-02 (MSN 02798). Look in the CFM56 engine IPC

TORQUE SUMMARY

Hose / tube coupling nuts	135-145 lbf.in 15.3-16.4 N.m
Hose at pylon interface tube	170-190 lbf.in 19.2-21.5 N.m
Mid-stage tee union (35)	110-120 lbf.in 12.4-13.6 N.m
Clamp bolts (15)	30-35 lbf.in 3.4-4.0 N.m

Use TWO wrenches on the coupling nuts (one holds the union). Thin layer of silicone lubricant CP5063 on the threads. Do not fit tubes or hoses with damaged threads. N.m = m.daN × 10.

Pylon interface duct coupling (65) (AMM 71-00-00-400-042-A): torque nut to the value shown on the coupling, tap round it with a fiber hammer, torque again, tap, torque again. Plug / union (69) on the upper HP manifold: 24.63-25.37 lbf.ft (3.34-3.44 m.daN), lockwire.

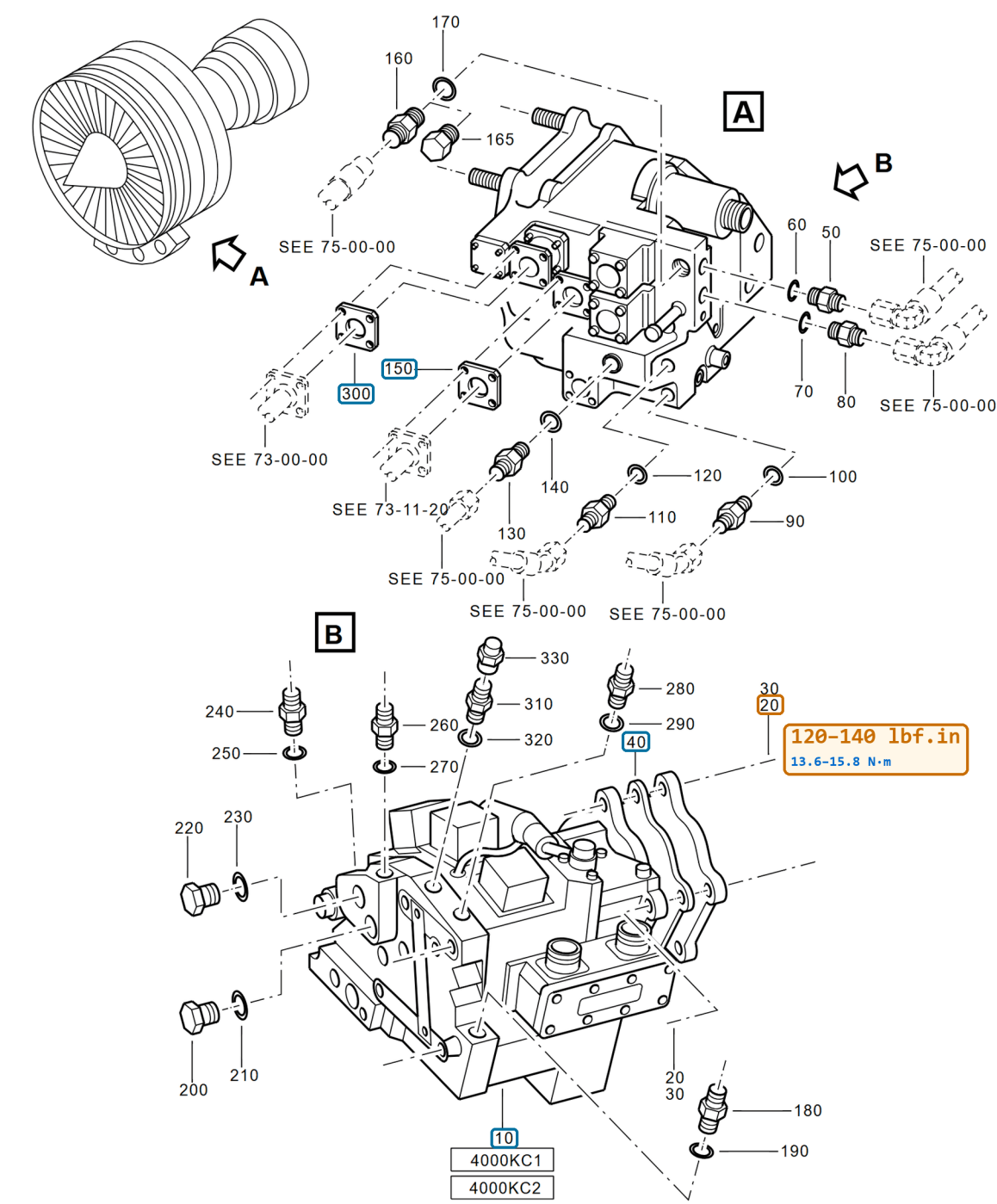
Other hose/tube versions (36-11-49-420-089-D): coupling at the tube end 150-160 lbf.in (1.70-1.81 m.daN), coupling at the pylon interface tube 170-190 lbf.in.

Figure 36-11-49-991-50500-06-C (SHEET 1) - Pneumatic system tubes and hoses, engine to pylon (flanges STA 215 / STA 221). Numbers = AMM item numbers; the table uses IPC item numbers.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · HYDROMECHANICAL UNIT (HMU) · Fuel metering

AMM 73-21-10-400-002-A (torque) · IPC 73-21-10-01A (part number) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	HMU, hydromechanical unit	8061-526 ... 8061-536	by SB: -531 post 73-0018 · -532 post 73-0038 · -533 post 73-0082 · -534 / -535 / -536 post 73-0127 / 73-0227 · FIN 4000KC1/KC2
20	Nut (mount to fuel pump)	J1092P05	120-140 lbf.in
30	Washer	AN960C516L	
40	Gasket (pump pad)	1754M36P01	40A 9516M81P01 pre SB 72-0096 · 40B 1797M54P01 post SB 72-0096
150 / 300	Gasket seal	J219P03 / J219P04	alt J219P03A/B · J219P04A/B (SB 72-0379)
50 / 240 / 280	Nipple, spherical end tube (size 6)	R287P06	with O-ring J221P906
80 / 260	Nipple, spherical end tube (size 8)	R287P08	with O-ring J221P908
110 / 130 / 160 / 180 / 310	Nipple, tube spherical (size 4)	R287P04	with O-ring J221P904 · 160 pre SB 73-0096 · plug 165 AS9902-04 post
330	Cap, tube	J1189G04	post SB 73-0112
Seals	Preformed packings (always NEW)	J221P904 / P906 / P908	alt 649-393-90X-0 or J222P90X (SB 72-0379)

TORQUE SUMMARY	
HMU mount nuts (20)	120-140 lbf.in 13.6-15.8 N.m
Nipples VBV open / VSV head	270-300 lbf.in 30.5-33.9 N.m
Hoses VBV open / VSV head	450-550 lbf.in 50.8-62.2 N.m
Heater return hose nut	650-770 lbf.in 73.4-87.0 N.m
Fuel supply union	900-1100 lbf.in 101.7-124.3 N.m

Mount nuts: 120-140 lbf.in (1.36-1.58 m.daN), tool 856A1336G02. Do NOT hold the HMU by its torque motors. Gasket on pump pad: engine oil CP2442.

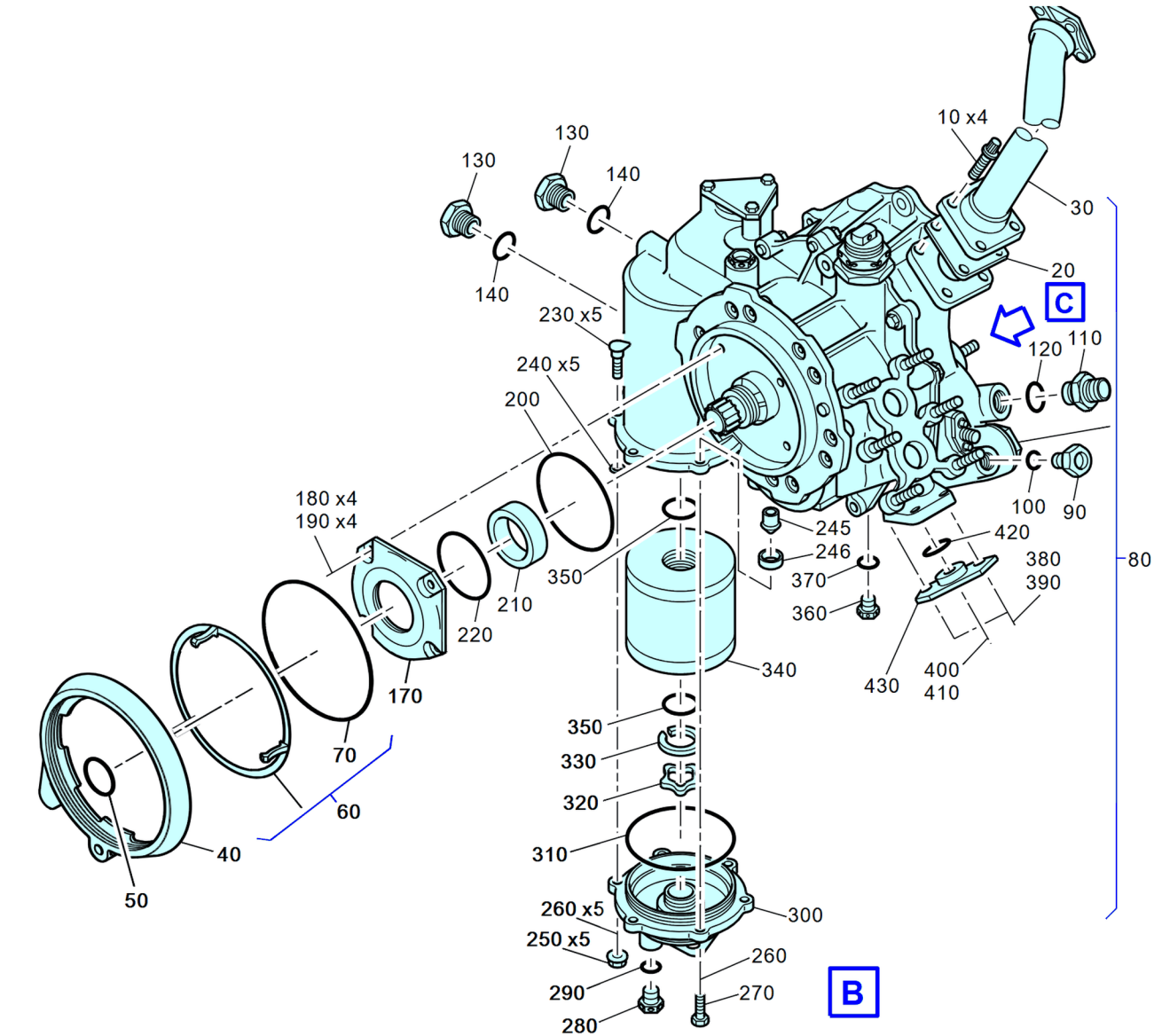
Nipples on HMU (O-ring with vaseline CP5070): 270-300 lbf.in VBV open and VSV head · 180-200 VBV closed, PCR, LPTACC, VSV rod · 135-150 RACSB/TBV, HPTACC, SOV, BSV, OVBD drain.

Hoses on the nipples (two wrenches): 450-550 lbf.in VBV open and VSV head · 270-300 VBV closed, PCR, LPTACC, VSV rod · 135-150 RACSB/TBV, HPTACC, SOV, BSV · 150-160 OVBD tube.

Servo heater return hose: bolts 47-53, coupling nut 650-770 lbf.in. IDG tube bolts 47-53. Fuel supply tube / transmitter bolts 55-70 in sequence, union 900-1100 lbf.in. Electrical connectors: hand + 1/8 turn. N.m = lbf.in x 0.113.

CFM56-5B · FUEL PUMP AND FILTER · Gearbox

AMM 73-11-10-400-003-A (torque) · IPC 73-11-10-01C (part number) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
80	Fuel pump	714900-3 / 724400-2 / 714900-5	by SB: 724400-2 post 73-A0062 · 714900-5 post 73-0129
10	Bolt (x4, fuel inlet tube)	J644P09A	98-110 lbf.in · thread with graphite vaseline CP2101
20	Gasket, inlet tube	J219P07	alt J219P07A / J219P07B (SB 72-0379)
30 / 40	Fuel inlet tube · clamp	336-493-204-0 · 301-495-102-0	
50 / 60 / 70	O-ring · support · packing (QAD seals)	J221P215 · 9057M50P01 · 1338M79P01	50A 649-393-215-0 · 70 post SB 72-0094 · always NEW
170 / 210	Seal carrier · shaft seal	215717-1 · 215182	220 O-ring 94501-26 · 200 packing M25988-1-151
230 / 240	Bolt · retaining ring (x5)	219818-2 · MS16632-4031	cover plate 430 = 217558 · bolts 47-51 lbf.in
300	Filter cover	219819	post SB 73-A0062 · plugs MS9954-03/-04/-06/-08
340	Filter element	CA01962B / ACC462F2038M	post SB 73-0107 · pre: CH0697101552N00 · ACB006F2474Y6
350 / 420	Packing (filter cover · cover plate)	M25988-1-123	350A M83248-1-123 post SB 73-0084 · always NEW
110	Nipple, tube spherical	219106-1	with packings M25988-1-908 / -910 / -904

TORQUE SUMMARY

QAD bolt (final)	190-230 lbf.in 21.5-26.0 N·m
Fuel supply tube bolts	98-110 lbf.in 11.1-12.4 N·m
Filter housing nipples	150-160 lbf.in 17.0-18.1 N·m
Oil tube coupling nuts	270-300 lbf.in 30.5-33.9 N·m

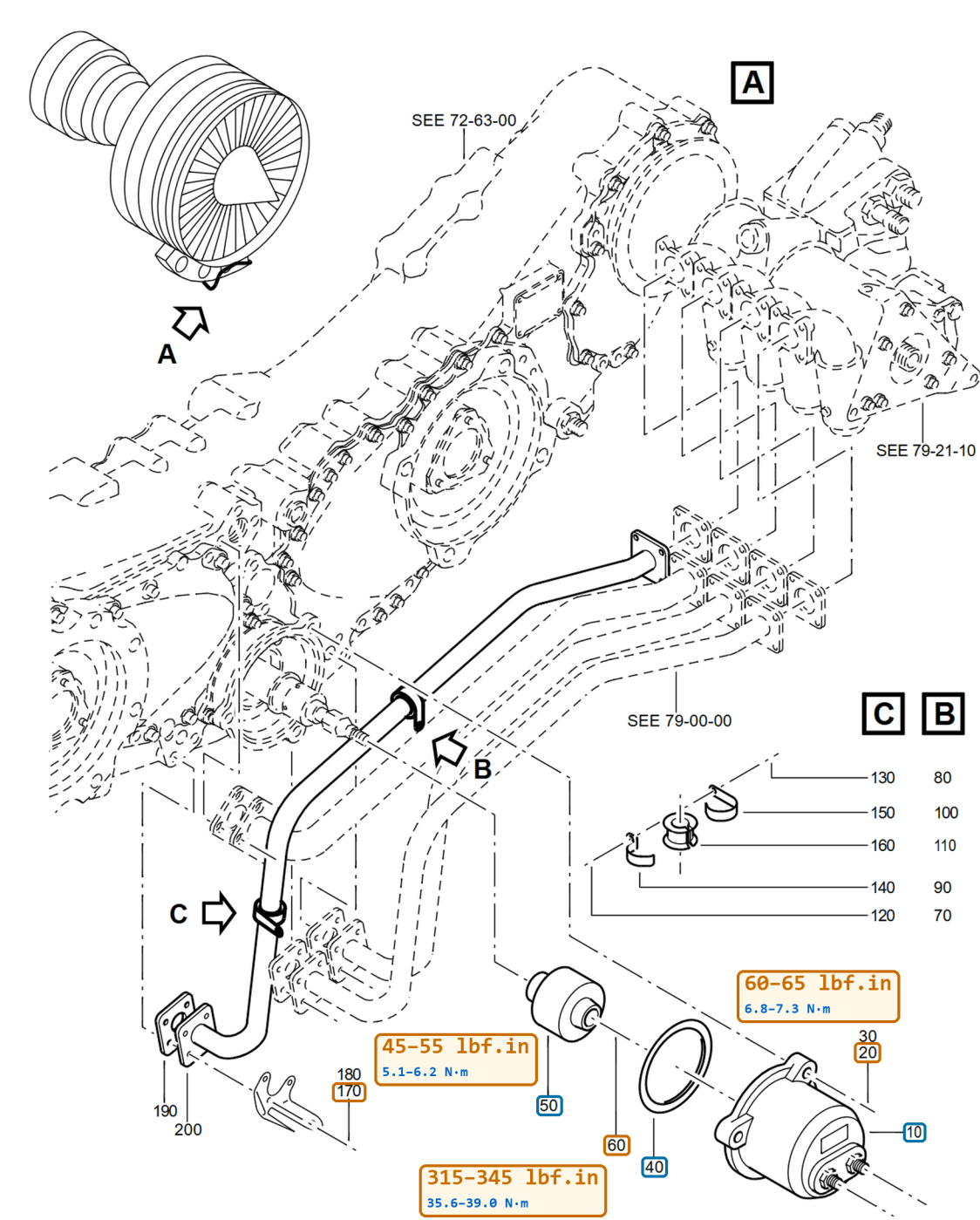
QAD bolt: thread with graphite vaseline CP2101, tighten 310-320 lbf.in to get the minimum gap (DIM A), then loosen and torque 190-230 lbf.in (2.15-2.60 m.daN) and safety with wire CP8001/CP8002. O-ring on the pump shaft and QAD seal: engine oil CP2442.

Nipples on filter housing: 150-160 lbf.in · nipple on pump: 45-55 · cover plate bolts: 47-51 · plug on cover plate: 90-100 (safety wire CP8001/8002/8006) · fuel supply tube bolts: 98-110 (gasket with oil CP2442).

Aft sump oil supply tube from the AGB (two wrenches): coupling nuts 270-300 lbf.in, clamp bolt 45-50. After this: oil/fuel heat exchanger, servo fuel heater and HMU. Then wet motoring, idle check and FADEC ground test. N·m = lbf.in x 0.113.

CFM56-5B · CONTROL ALTERNATOR (PMA) · FADEC power

AMM 73-21-30-400-001-A (torque) · IPC 73-21-30-01A (part number) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	Alternator stator	87006-5 ... 510846-1	by SB: 87006-9 post 72-0209 · 506569-1 post 73-0209 · 510846-1 post 73-0240 · 87006-3 deleted
20 / 30	Bolt (x3) · washer	J644P13A · MS9321-10	60-65 lbf.in
40	Seal (O-ring), stator	J221P156	alt 649-393-156-0 (SB 72-0379) · always NEW · lubricate with oil CP2442
50	Rotor	85465-1 / 85465-2 / 505344-1	-2 post SB 72-0061 · 505344-1 post SB 73-0209
60	Rotor nut (always NEW)	4040T77P03	alt 4040T77P01 · 315-345 lbf.in · wrong torque = rotor disengage
70 / 120	Nut (lube tube clamps)	J626P04	
80 / 130	Bolt (lube tube clamps)	J644P07A	
90 / 140	Clip	AS12851	inner spring clips AS12821 (100 / 150) · clips AS12902 (110 / 160)
170	Bolt (bracket to AGB)	MS9556-10	45-55 lbf.in · graphite vaseline CP2101
180	Bracket assy	338-046-101-0	
190	Gasket (lube tube)	J219P03	alt J219P03A / J219P03B (SB 72-0379)
200	Lube tube	338-024-004-0	2 new gaskets between lube module, tube and AGB

TORQUE SUMMARY	
Rotor nut (NEW)	315-345 lbf.in 35.6-39.0 N·m
Stator bolts (3)	60-65 lbf.in 6.8-7.3 N·m
Lube tube bolts	45-55 lbf.in 5.1-6.2 N·m

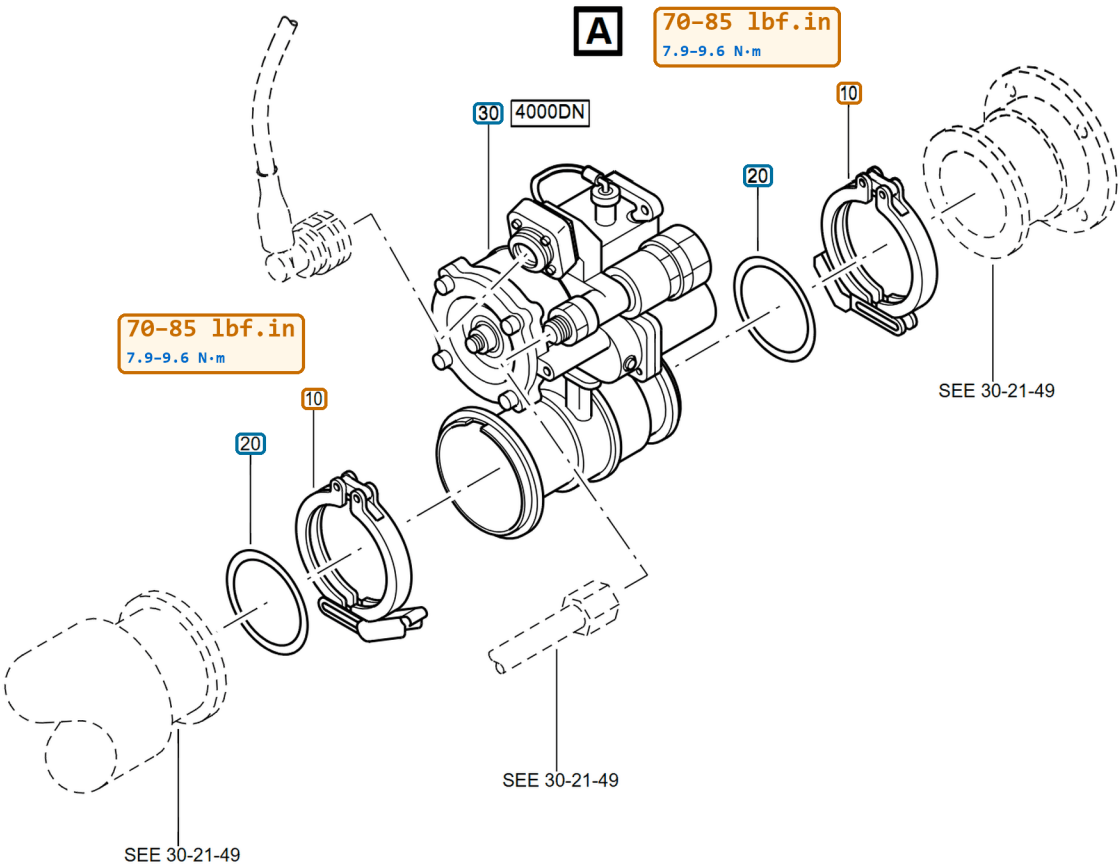
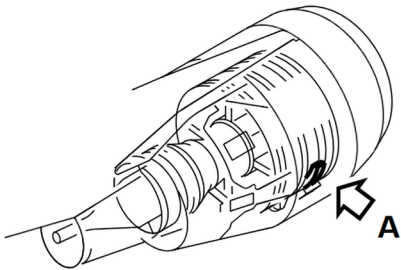
Rotor nut: always a NEW nut, thread with engine oil CP2442, torque 315-345 lbf.in (3.56-3.90 m.daN) with the core locked (tool 856A2717G01). Wrong torque can disengage the alternator rotor.

Stator: guide pins 856A2953G01 in the 3 holes, new O-ring, three bolts + washers 60-65 lbf.in (0.68-0.73 m.daN). Lube tube bolts 45-55 lbf.in with graphite vaseline CP2101; two clamps safetied.

Electrical connectors channel A and B: hand tight plus 1/8 turn (soft jaw pliers). N·m = lbf.in x 0.113.

CFM56-5B · ENGINE ANTI-ICE VALVE · Air intake (inlet)

AMM 30-21-51-400-042-A (torques) · IPC 30-21-51-01A (part number) · A320 VLG



ITEM	DESCRIPTION	PART NUMBER	ALTERNATES / NOTES
10	Coupling (x2)	30398-200	30659-200 (post SB CFM95089MW1) · nut 70-85 lbf.in
20	E-seal (x2) · AMM item 5	13100-200	12109-200 · A0945 (old) · replace if damaged
30	Anti-ice valve · FIN 4000DN · AMM item 15	327155-4	327155-3 · 327155-2 · 327155-1 (see SB CFM21315PB1 / CFM98074MW1)
-	Muscle pressure hose (AMM 20) · coupling	see IPC 30-21-49	150-160 lbf.in · hold the union with a 2nd wrench

TORQUE SUMMARY

Duct couplings (x2)

70-85 lbf.in
7.9-9.6 N.m

Hose coupling to valve

150-160 lbf.in
16.9-18.1 N.m

Flow arrow on the valve points to the air-intake cowl duct; index mark aligned with the forward duct. Same job on engine 1 and 2.

Couplings: saddle washer between nut and coupling body; hinge and nut parts NOT on the side of the engine cowls. Torque 70-85, tap round the coupling with a fibre hammer, repeat 2 more times, then torque again.

Electrical connector 4000DN-A: hand tight. Then leak test (AMM 30-21-49-790-803-A).

Figure 30-21-51-01A - Valve installation, CFM56 (IPC). Numbers are IPC item numbers. Valve FIN 4000DN.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

CFM56-5B · TORQUE SUMMARY · All sheets in one table

Every torque from the engine change sheets, same values as each sheet.

ENGINE MOUNTS	
Forward mount	
Bolts 10	320-350 lbf.ft 433.9-474.5 N·m
Bolts 40	24-36 lbf.in 2.7-4.1 N·m
Aft mount	
Bolts 200	480-580 lbf.ft 650.8-786.4 N·m
Fwd mount: engine side + lock	
Link bolts 35	260-320 lbf.in
Nuts 20	20-25 lbf.in
Bolts 50 + LOCKWIRE	336-348 lbf.in
Bolts 85, 90 + LOCKWIRE	168-228 lbf.in
Bolts 95 + LOCKWIRE	744-816 lbf.in
Aft mount: engine side + lock	
Spanner nut 75	80-88.2 lbf.ft
Spanner nut 65	35-38.58 lbf.ft
Nuts 55 (retainers)	24-27 lbf.in
FUEL	
HMU (fuel metering)	
HMU mount nuts (20)	120-140 lbf.in 13.6-15.8 N·m
Nipples VBV open / VSV head	270-300 lbf.in 30.5-33.9 N·m
Hoses VBV open / VSV head	450-550 lbf.in 50.8-62.2 N·m
Heater return hose nut	650-770 lbf.in 73.4-87.0 N·m
Fuel supply union	900-1100 lbf.in 101.7-124.3 N·m
Fuel pump and filter	
QAD bolt (final)	190-230 lbf.in 21.5-26.0 N·m
Fuel supply tube bolts	98-110 lbf.in 11.1-12.4 N·m
Filter housing nipples	150-160 lbf.in 17.0-18.1 N·m
Oil tube coupling nuts	270-300 lbf.in 30.5-33.9 N·m
STARTER	
Starter (air)	
Starter clamp nut (20)	75-80 lbf.in 8.5-9.0 N·m
Air duct V-clamp	70-80 lbf.in 7.9-9.0 N·m

lbf.in / lbf.ft in orange, N-m in blue. "value on face" = the coupling shows its own torque value. See each sheet for part numbers and the AMM task.

Source: AMM/IPC A320 VLG, rev 85 (01-Aug-2026). Study aid only: it does not replace the current official AMM. Check effectivity (MSN/FSN, service bulletins).

GENERATOR	
IDG	
Union 70	400-425 lbf.in 45.2-48.0 N·m
Union 90	430-455 lbf.in 48.6-51.4 N·m
Oil-in line nut	725-850 lbf.in 81.9-96.1 N·m
Oil-out line nut	700-730 lbf.in 79.1-82.5 N·m
Terminal-block nuts (N, T1-T3)	144-168 lbf.in 16.3-19.0 N·m
Terminal cover screws	20-22 lbf.in 2.3-2.5 N·m
QAD tension bolt	265-305 lbf.in 29.9-34.5 N·m
IDG QAD bolt	
QAD tension bolt (2)	265-305 lbf.in 29.9-34.5 N·m
Allowed drop on re-check	2 lbf.ft max 2.7 N·m
IDG QAD adapter	
Screws 20 (8 per adapter)	356-384 lbf.in 40.2-43.4 N·m
HYDRAULICS	
Green pump (EDP)	
Mount nuts 10	260-320 lbf.in 29.4-36.2 N·m
Case drain 35	270-290 lbf.in 30.5-32.8 N·m
Suction 55	860-940 lbf.in 97.2-106.2 N·m
Pressure 75	1350-1450 lbf.in 152.6-163.9 N·m
Hose nut, case drain	215-245 lbf.in 24.3-27.7 N·m
Hose nut, suction (x2)	800-900 lbf.in 90.4-101.7 N·m
Hose nut, pressure	900-1000 lbf.in 101.7-113.0 N·m
Yellow pump (EDP)	
Mount nuts 10	260-320 lbf.in 29.4-36.2 N·m
Case drain 30	270-290 lbf.in 30.5-32.8 N·m
Suction 50	860-940 lbf.in 97.2-106.2 N·m
Pressure 70	1350-1450 lbf.in 152.6-163.9 N·m
Hose nut, case drain	215-245 lbf.in 24.3-27.7 N·m
Hose nut, suction + adapter	800-900 lbf.in 90.4-101.7 N·m
Hose nut, pressure	855-945 lbf.in 96.6-106.8 N·m

PYLON INTERFACE	
Fluid disconnect panel	
Bolts 25 (main fuel)	81-90 lbf.in 9.2-10.2 N·m
Bolts 35 (fuel return)	24-36 lbf.in 2.7-4.1 N·m
Case drain hose 50	215-245 lbf.in 24.3-27.7 N·m
Pressure hose 55	855-945 lbf.in 96.6-106.8 N·m
HCU hose 175	85-100 lbf.in 9.6-11.3 N·m
Suction hose 60	HAND TIGHT
ENGINE CONTROLS	
LPTACC valve	
Bolts 70 and 160	100-110 lbf.in 11.3-12.4 N·m
Bolts 140 and 120	100-110 lbf.in 11.3-12.4 N·m
Bolts 30 (plate)	100-130 lbf.in 11.3-14.7 N·m
Drain tube nut	135-150 lbf.in 15.3-17.0 N·m
Clamp 60 nut	40-44 lbf.in + SLT 4.5-5.0 N·m
HPTACC valve	
Bolts 40, 80, 110	55-70 lbf.in 6.2-7.9 N·m
Bolts 50 and 60	60-70 lbf.in 6.8-7.9 N·m
Strap / loop clamp bolts 210, 220	55-70 lbf.in 6.2-7.9 N·m
Fuel manifold bolts 300, 310	55-70 lbf.in 6.2-7.9 N·m
V-band clamp nut 180	70-85 lbf.in 7.9-9.6 N·m
ENGINE CONTROLS	
Control alternator (PMA)	
Rotor nut (NEW)	315-345 lbf.in 35.6-39.0 N·m
Stator bolts (3)	60-65 lbf.in 6.8-7.3 N·m
Lube tube bolts	45-55 lbf.in 5.1-6.2 N·m
MASTER DRAIN	
Master drain mast	
Drain mast screws (5)	20-25 lbf.in 2.3-2.8 N·m
Manifold module nuts	20-25 lbf.in 2.3-2.8 N·m
Drain tube coupling nuts (x6)	300-315 lbf.in 33.9-35.6 N·m

NACELLE / EXHAUST	
Inlet cowl	
Nuts 10 (x36)	340-360 lbf.in 38.4-40.7 N·m
Hoist insert bolts	60-70 lbf.in 6.8-7.9 N·m
Anti-ice valve	
Duct couplings (x2)	70-85 lbf.in 7.9-9.6 N·m
Hose coupling to valve	150-160 lbf.in 16.9-18.1 N·m
Core nozzle (config 1)	
Nuts 10 (x88)	50-70 lbf.in 5.7-7.9 N·m
Core nozzle (config 2/3)	
Nuts 10 (x88)	50-70 lbf.in 5.7-7.9 N·m
Supports 35 · Config 2	18 places
Supports 35 · Config 3	25 places
Centerbody	
Nuts 10 (x16)	220-240 lbf.in 24.9-27.1 N·m
BLEED	
Pylon bleed flanges	
Hose / tube coupling nuts	135-145 lbf.in 15.3-16.4 N·m
Hose at pylon interface tube	170-190 lbf.in 19.2-21.5 N·m
Mid-stage tee union (35)	110-120 lbf.in 12.4-13.6 N·m
Clamp bolts (15)	30-35 lbf.in 3.4-4.0 N·m
HP bleed valve (HPV)	
HP sense tube fitting	135-145 lbf.in 15.3-16.4 N·m
Couplings 15 and 30	value on face 50% / 100% / 100%
Pressure reg. valve (PRV)	
Sense lines 25 and 35	135-145 lbf.in 15.3-16.4 N·m
Couplings 20	115-124 lbf.in 13-14 N·m
IP check valve	
Link nuts 35	75-90 lbf.in 8.5-10.2 N·m
Couplings 20	value on face tap + torque x2
Overpressure valve (OPV)	
Clamps 2 and 5	75-85 lbf.in 8.5-9.6 N·m

CFM56-5B · ENGINE CHANGE · CONSUMABLES

Gathered from the sheets of this notebook · no new data · A320 VLG

TASK	CONSUMABLE	PART NUMBER	RULE
Centerbody	Nuts (16)	VN405W064 · BH00184-6 · H19083-6	ALWAYS NEW nuts. Washers (16) VN936NP6
Hydraulic pump	Mount nuts (4)	52Z2278-064	NEW nuts; discard any nut that turns by hand
Hydraulic pump	Gasket	S700M0986	check AMM
Hydraulic pump	Packings	NAS1612-8 · NAS1612-20 · NAS1612-16 (A991600AA954)	check AMM
Hydraulic pump	Back-up ring	MS28774-123	check AMM
IDG	Preformed packings (4)	M83248-1-908 · -906 · -910 · -912	NEW; oil with 03ABA1 / 03ABB1
IDG QAD adapter	Gasket	1700182	NEW each time
Starter	Preformed packing (O-ring)	1338M79P01	always NEW; oil CP2442
Starter	Packing / support packing	649-393-222-0 · 9057M50P01	seal ring: oil CP2442
HP bleed valve	E-seals (4)	8757-400 · 13226-400	clean; NEW if damaged
PRV	E-seals (2)	8757-400 · 13226-400	clean; NEW if damaged
IP check valve	E-seals (2)	8757-400 · 13226-400	clean; NEW if damaged
Bleed couplings	HPV · PRV · IP couplings	30499-400 · 30680-400	torque = value on the face
HPTACC	Metal gaskets	1467M53P01 · 9375M33P01 · 9375M33P02 · 1324M88P03	NEW every time
HPTACC	Metal seal	1444M95P07 · 1444M95P05	NEW every time
LPTACC	Gasket plate / valve	649-392-510-0 · -501 (pre SB 72-0363)	check AMM
Pylon fluid panel	Gasket, main fuel supply	MS27196-24	NEW
Pylon fluid panel	Seal, fuel return hose	718115-08	NEW
Forward mount	Nut (bolt 10)	VN401B144	turn torque 70 lbf.in–50 lbf.ft; if lower: NEW nut
Aft mount	Barrel nut (bolt 200)	SL4001-16	turn torque 90 lbf.in–66.66 lbf.ft; if lower: NEW nut

■ Always NEW (AMM / sheet says so) ■ Check / replace if damaged: confirm in the AMM task

MATERIALS (CP / OIL / WIRE)	
CP2101	Graphite mineral vaseline Starter clamp nuts · LPTACC bolts 70/120/140/160 · HPTACC bolts 40
CP2442	Engine oil Starter seal ring and O-ring
CP2619	Never-Seez pure nickel Centerbody stud threads
CP5063	Silicone lubricant HPV sense tube fitting threads · PRV nut threads (thin layer only) · aft mount bolt/pin
CP2541	Sealant RTV 88 Forward mount links (washers 40, retainers 30)
03PBD1	Anti-seize nickel + graphite QAD adapter screws (8): conical heads and threads
03ABA1 / 03ABB1	Turbine engine oil IDG preformed packings
CP8001 / CP8002	Safetywire / lockwire 0.8 mm Pylon panel bolts · QAD tension bolt (CP8002) · HPTACC bolts 40 · fwd mount bolts 50/85/90/95

TOOLING TO HAVE READY
Plastic / fibre / soft-face mallet bleed couplings (tap) · QAD ring
Adapter 98D71203002206 forward mount bolt (torque wrench)
Adapter 98D71203002208 aft mount bolt (torque wrench)
Two wrenches (countertorque) IDG lines · hydraulic and sense unions · OPV

Tightening torques are on each task sheet; this page only lists what you throw away or must have ready.
Part numbers change with SB / SPIB: check the effectivity in the IPC before ordering. Nothing here replaces the current AMM.