EXECUTIVE SUMMARY

Process buildup throughout the rotary valve assembly prevented vane tip-to-housing gap measurements on both A-side and B-side rotor sectors, leaving wear trend data incomplete for this cycle. Heavy product accumulation is visible on the rotor vanes, around the valve base, and on the surrounding deck plate. Drive train, switchgear, VFD, and combustion air damper hardware all inspected clean with no mechanical defects identified. Schedule a cleaning intervention and re-attempt gap measurements before the next reporting cycle.

PRIORITIZED ACTIONS

1 Clean rotor vanes and housing bore, then complete A-side and B-side vane tip gap measurements — WARNING

TARGET: WITHIN 30 DAYS

2 Remove product buildup from valve base, deck plate, and surrounding floor area — WARNING

TARGET: WITHIN 30 DAYS

3 Inspect rotor end plate wear pattern once vanes are cleaned and document baseline — INFO

TARGET: NEXT QUARTERLY INSPECTION

4 Verify housing bolt flange and base anchor torque during cleaning shutdown — INFO

TARGET: NEXT QUARTERLY INSPECTION

5	Continue routine monitoring of switch valve AC drive, gear mesh, and damper actuators TARGET: NEXT QUARTERLY INSPECTION	GOOD

FINDINGS

01 Fresh air / purge damper

GOOD

— LEGEND

1 **Upper Damper Actuator**
Electric actuator mounted on purge damper

2 **Lower Damper Actuator**
Second actuator driving fresh air damper

3 **Damper Housing**
Square duct housing appears intact

4 **Silo Wall Interface**
Duct penetration into silo, no leakage

— DISCUSSION

Fresh air and purge dampers photographed from grade, both electric actuators mounted and intact. Square duct housing and the silo wall penetration show no leakage or deformation. No action required.

— RECOMMENDATION

Maintain on standard PM cycle; verify actuator stroke during next functional test.

02 Untitled finding

WARNING

— LEGEND

1 **Floor Debris Accumulation**
Excess material buildup around valve base

2 **Switch Gear Assembly**
Switchgear inspected, no issues found

3 **Housing Bolt Flange**
Flange bolts seated, no leakage visible

— DISCUSSION

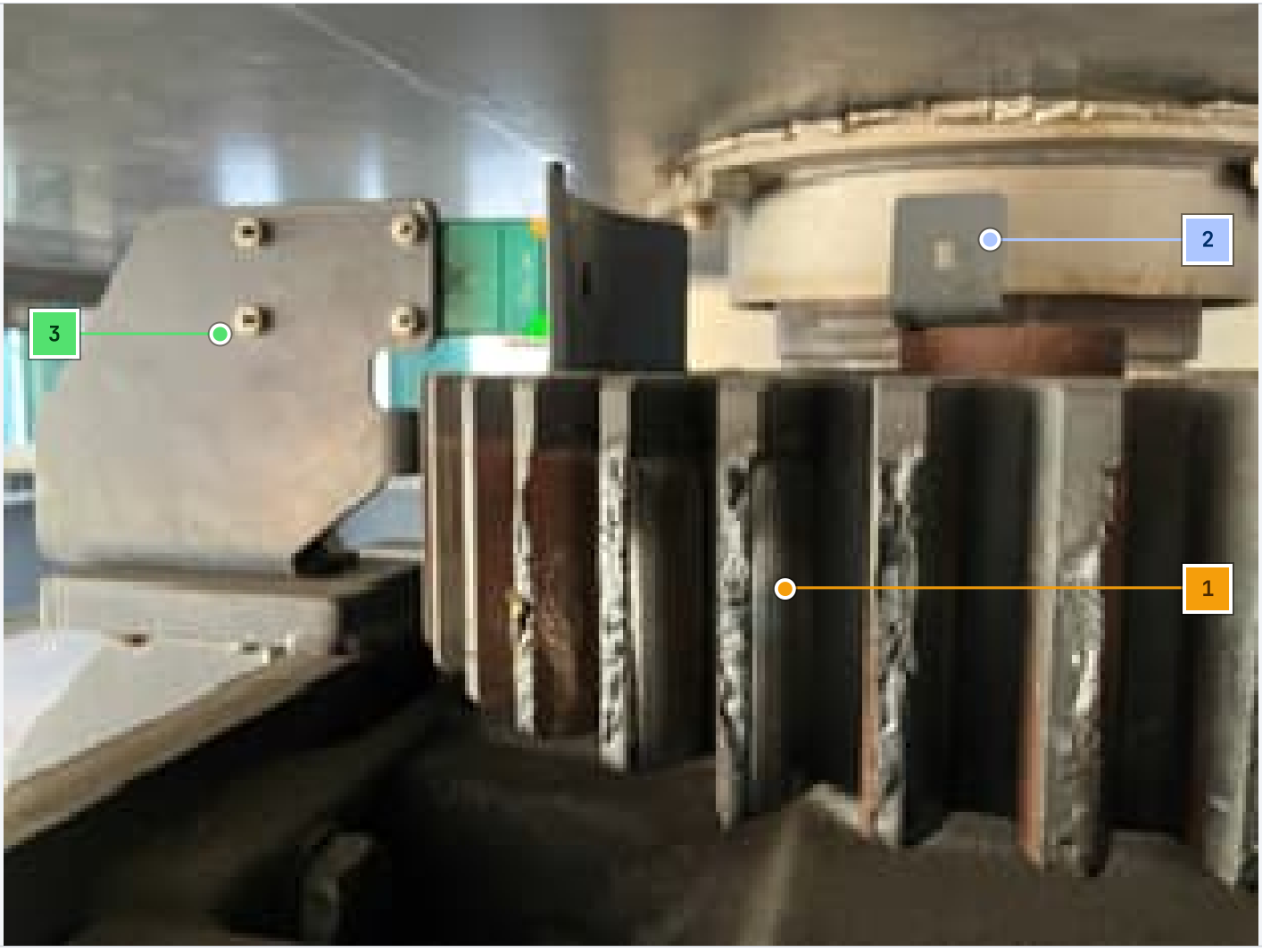
Switchgear assembly and housing bolt flange inspected clean, but the deck plate around the valve base shows significant product accumulation. Buildup at this location masks any developing leakage at the flange and creates a housekeeping hazard.

— RECOMMENDATION

Vacuum and remove floor debris around the valve base, then re-inspect the flange face for seepage.

03 Untitled finding

WARNING



— LEGEND

1 **Material Buildup**
Heavy product accumulation on rotor vanes

2 **Rotor End Plate**
Visible wear pattern on rotor hub

3 **Switch Gear Housing**
Switch gear assembly intact, no issues

— DISCUSSION

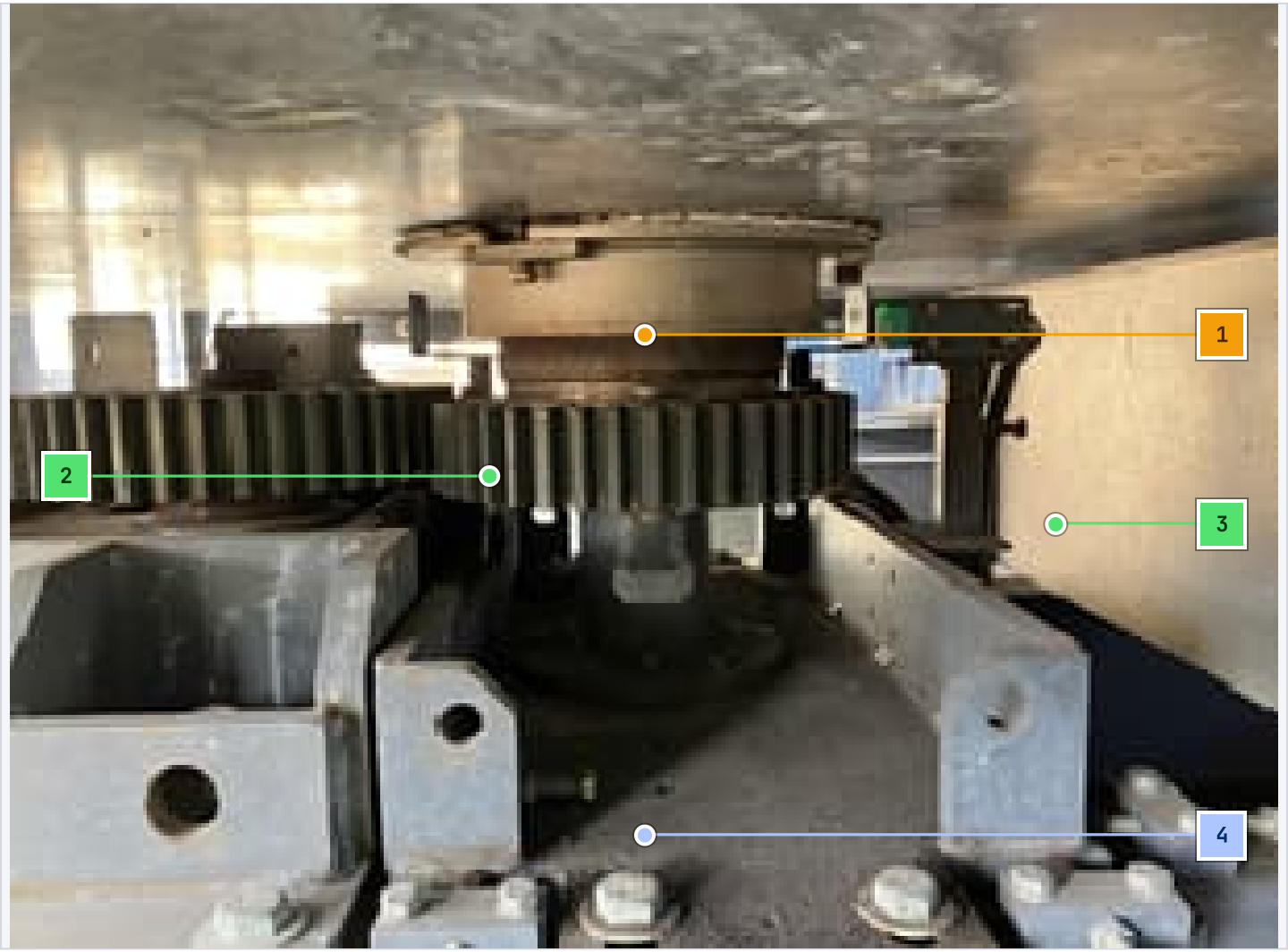
Heavy product is packed onto the rotor vanes and across the visible rotor end plate, with a wear pattern beginning to form at the rotor hub. The switch gear housing itself is intact, but the vane fouling is what blocked gap measurements elsewhere in this walkdown.

— RECOMMENDATION

Clean vane faces and rotor end plate during the next planned outage and photograph the hub wear pattern for trending.

04 Untitled finding

WARNING



— LEGEND

1 **Material Build-Up**
Excess dust accumulation around valve body

2 **Gear Mesh**
Drive gear teeth engaged, no visible wear

3 **Switch Gear Housing**
Switch gear assembly intact, no faults

4 **Base Mount Bolts**
Anchor bolts seated, no looseness observed

— DISCUSSION

Excess dust coats the valve body and lower housing. Drive gear mesh and switch gear housing are sound, and the base mount anchor bolts are seated with no looseness.

— RECOMMENDATION

Include this valve body in the cleaning scope and confirm anchor bolt torque while access is open.

05 Untitled finding

GOOD

— LEGEND

1 **Damper Linkage**
Combustion air damper linkage intact and aligned

2 **Handwheel Actuator**
Manual handwheel actuator in normal position

3 **Mount Bracket**
Valve mount bracket secure, no deformation

— DISCUSSION

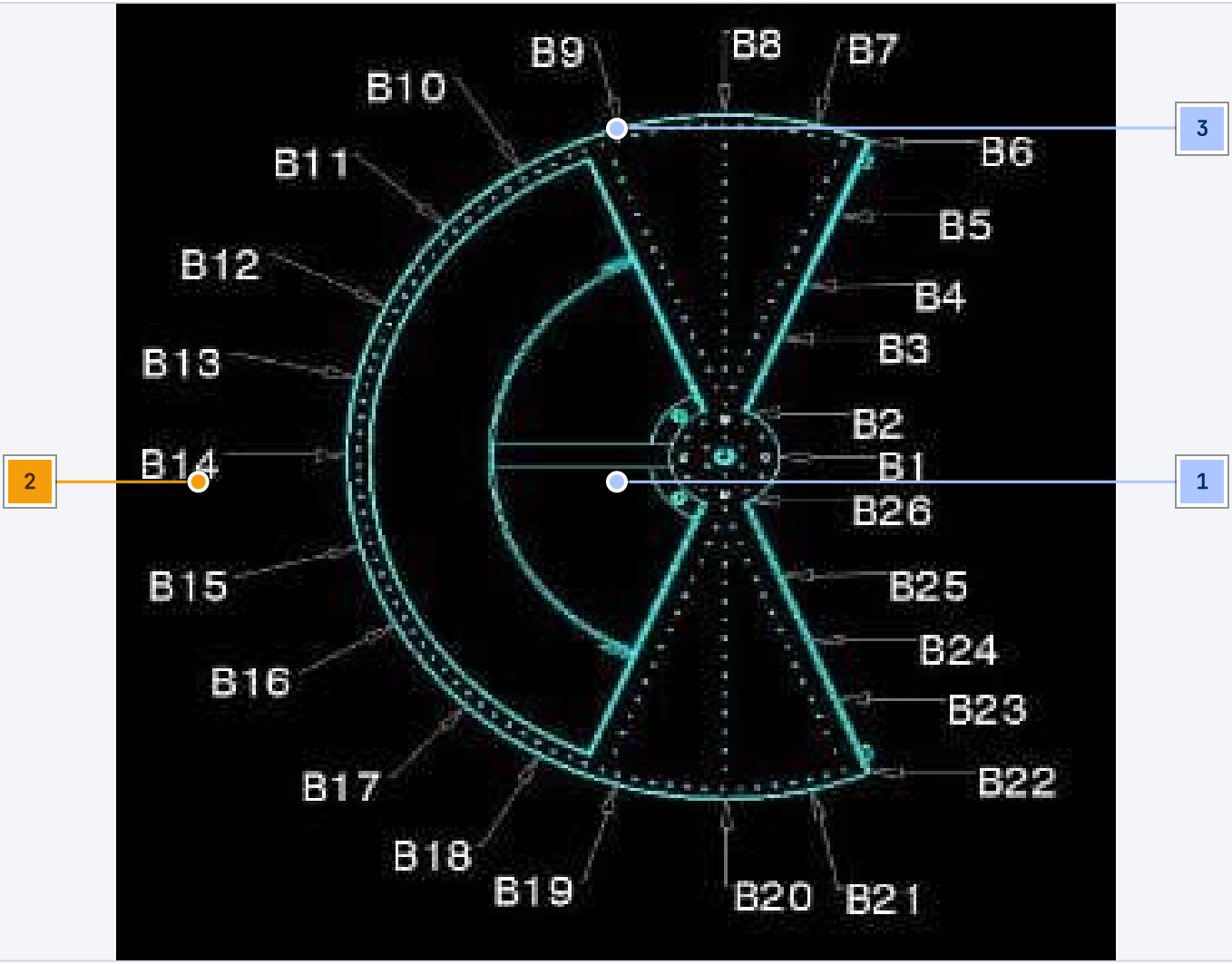
Burner walkdown covered burner stone, nozzle, gas train, gas transmitter, mount, and combustion air damper. Damper linkage is aligned, handwheel actuator is in its normal position, and the mount bracket shows no deformation.

— RECOMMENDATION

No action required; retain on standard burner PM interval.

06 Untitled finding

WARNING



— LEGEND

1 **Central Hub**
Rotor shaft axis reference for gap measurements

2 **Vane Tip Clearance**
Housing-to-vane gap location, measurement obstructed

3 **Vane Numbering Sequence**
Labeled vane positions B7 through B26

— DISCUSSION

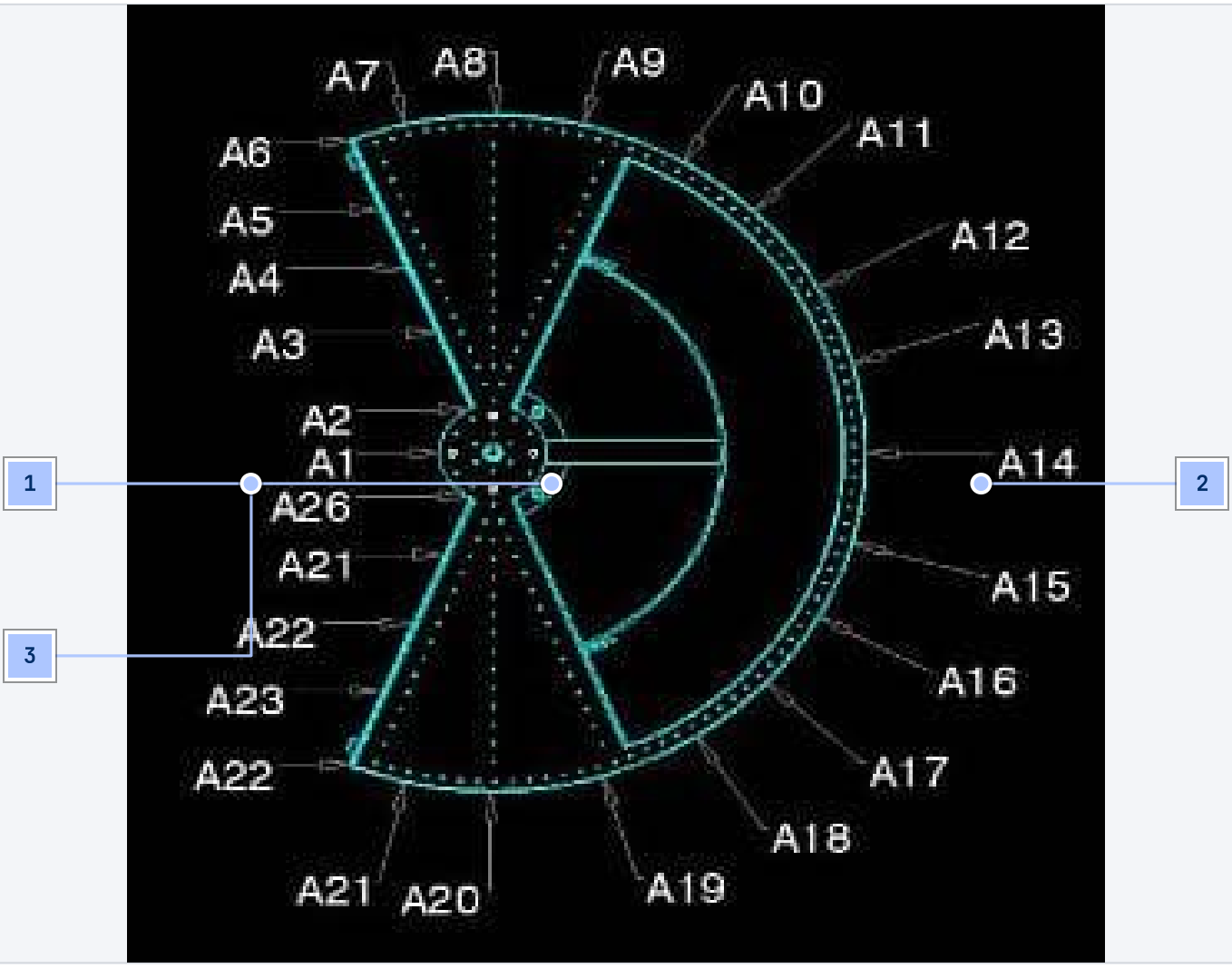
B-side rotor diagram shows vane positions B1 through B26 with the central hub as datum. Tip clearance measurements at the housing-to-vane interface could not be obtained because product buildup obstructed access to the gap stations.

— RECOMMENDATION

After cleaning, perform full B-side tip clearance sweep and log values against the B7–B26 station map.

07 Valve Gap measurements

WARNING



— LEGEND

1 **Rotor Tip Gap**
Rotor vane tip-to-housing clearance measurement points

2 **Housing Bore Stations**
Circumferential measurement positions around housing

3 **Shaft Reference Point**
Central shaft datum for gap indexing

— DISCUSSION

A-side rotor diagram identifies tip gap measurement stations A1 through A26 indexed off the central shaft datum. As with the B-side, process buildup prevented feeler gauge access at the housing bore stations, so no clearance data was captured this cycle.

— RECOMMENDATION

Complete A-side tip gap measurements at all 26 stations once the rotor and bore are cleaned; flag any station exceeding OEM clearance limits.

08 Switch valve AC drive

GOOD

— LEGEND

1 **VFD Display Reading**
Display shows 0.00 Hz, drive stopped

2 **Control Keypad**
FWD/REV/EXT keys intact and legible

3 **Equipment Identification**
Rotary Valve Motor VFD HMI label

— DISCUSSION

Switch valve AC drive HMI shows 0.00 Hz with the drive stopped at time of inspection. Keypad legends (FWD/REV/EXT) are intact and the Rotary Valve Motor VFD HMI identification label is in place.

— RECOMMENDATION

No action required; verify drive parameters at next controls PM.

09 Switch valve drive assy.

GOOD

— LEGEND

1 **Gear Mesh Engagement**
Drive and pinion gear teeth meshed correctly

2 **Valve Shaft Coupling**
Coupling hub seated on valve shaft

3 **Gear Tooth Condition**
Teeth show clean wear pattern, no chipping

— DISCUSSION

Switch valve drive assembly shows correct gear mesh engagement between drive and pinion, with clean wear pattern and no chipping on the tooth flanks. Valve shaft coupling hub is seated correctly.

— RECOMMENDATION

No action required; continue lubrication on existing schedule and re-inspect gear teeth next cycle.