JOB HAZARD ANALYSIS (JHA)

Business name

Document: JHA-001 Rev 1
Prepared: Nov 9, 2026
Review by: Dec 9, 2026
Highest risk after controls: Medium

1. BUSINESS AND JOB DETAILS

Job	Replace a furnace	**Start date**	Nov 9, 2026
Working hours	7:00 am to 3:30 pm	**Trade**	HVAC

2. JOB STEPS, HAZARDS AND CONTROLS

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
1	A licensed gas fitter isolates gas and power, then the supplies are locked off	Gas and fuel lines Electric shock from live wiring Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	1.1 Isolate and purge the line before work, with the owner's approval. [Elimination] 1.2 Lock off and tag the isolation valve. [Engineering (guarding)] 1.3 Gas and fuel lines: see step 5 for the full controls [Administrative] 1.4 Isolate the power before any work. Do not work live. [Elimination] 1.5 Lock out and tag the disconnecting means with your own personal lock and tag so the circuit cannot be energized (29 CFR 1926.417). [Engineering (guarding)] 1.6 Test before you touch: prove dead at the point of work with a tested voltage tester. [Engineering] 1.7 Only qualified persons work on or near exposed energized parts. [Administrative] 1.8 Check for back feeds from solar, batteries and generators that can keep a circuit live after the main switch is off. [Administrative] 1.9 If energized work cannot be avoided, use an energized work permit, a safety observer and insulated tools, following NFPA 70E. [Administrative] 1.10 Wear insulated gloves, arc-rated clothing and a face shield when testing or working near live parts. [PPE]	**Medium Rare / Fatality**	Site supervisor
2	Check flues and surrounds for asbestos	Disturbing asbestos Rules: 29 CFR 1926.1101 and 40 CFR 61 Subpart M (NESHAP)	**Critical Possible / Fatality**	2.1 Treat insulation, surfacing and resilient flooring in buildings built before 1981 as asbestos unless testing shows otherwise, and get the owner's asbestos survey before you start. [Elimination] 2.2 Seal off the work area and keep everyone else out. [Engineering (guarding)] 2.3 If asbestos must be disturbed, keep it wet, use hand tools not power tools, and clean up with a HEPA vacuum. [Engineering] 2.4 Follow 29 CFR 1926.1101: competent person, work class, regulated area and exposure monitoring.	**Medium Rare / Fatality**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				[Administrative] 2.5 Commercial renovation and any demolition need a NESHAP asbestos inspection first, and demolition needs written notice to the state or EPA 10 working days before work starts (40 CFR 61 Subpart M). [Administrative] 2.6 Roofing felts, cement shingles and siding, roof coatings and old panel backboards can also contain asbestos. Test them or treat them as asbestos; asbestos roofing is removed intact with hand tools by trained workers (29 CFR 1926.1101(g)(8)). [Administrative] 2.7 Stop work straight away if you find suspect asbestos. Do not touch it and tell your supervisor. [Administrative] 2.8 Wear a fit-tested NIOSH-approved respirator suited to the work class, and disposable coveralls. [PPE]		
3	Remove the old unit with two people	Lifting and carrying heavy loads Cuts from sharp edges Tight spaces: attics and crawl spaces	**High Likely / Recordable / lost time**	3.1 Plan to avoid carrying: have materials delivered, and old items picked up, as close as possible to where they are used. [Elimination] 3.2 Use lighter or smaller loads: order smaller bags and shorter lengths, and drain or break down old items before moving them. [Substitution] 3.3 Use trolleys, pallet jacks, hoists, vacuum lifters or plant instead of carrying by hand. [Engineering] 3.4 Use a two-person lift for anything heavy, long or awkward. Plan the route first and clear it. [Administrative] 3.5 Keep the load close, back straight and no twisting. Turn with your feet. [Administrative] 3.6 Deburr or cover sharp edges, and fit edge protectors on exposed sheet metal. [Engineering] 3.7 Use knives with retractable or self-retracting blades. [Engineering] 3.8 Cut away from your body and keep your other hand clear. [Administrative] 3.9 Put used blades in a blade bin or sharps container. [Administrative] 3.10 Use two people to handle large sheets of metal or glass. [Administrative] 3.11 Do as much of the work as you can from outside the tight space. [Elimination] 3.12 Turn the power off at the panel before entering where you can, as damaged wiring may be live. [Engineering (guarding)] 3.13 Lay crawl boards across the joists so you cannot step through the ceiling. [Engineering] 3.14 Set up ventilation and lighting in the space. [Engineering] 3.15 Limit time in hot attics and take breaks somewhere cool. [Administrative]	**Medium Unlikely / Recordable / lost time**	Site supervisor
4	Install the new unit, flue and	Gas and fuel lines	**Critical**	4.1 Check for leaks with a gas detector before and during	**Medium**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
	connections	Fire from hot works Falling from a ladder Rules: 29 CFR 1926.352 and NFPA 51B (35 ft rule also in 1910.252(a)); 29 CFR 1926 Subpart X	**Possible / Fatality**	work, and ventilate the area. [Engineering] 4.2 Only licensed gas fitters work on gas lines. [Administrative] 4.3 Gas and fuel lines: see step 5 for the full controls [Administrative] 4.4 Use cold work methods where you can, such as bolting, press fittings or cutting with a saw instead of a torch. [Elimination] 4.5 Move anything that can burn at least 35 feet away, or cover it with fire blankets. [Engineering (guarding)] 4.6 Use fire-resistant screens to stop sparks reaching people or gaps in walls and floors. [Engineering] 4.7 Get a hot work permit before starting. [Administrative] 4.8 Keep a charged fire extinguisher and fire blanket at the work spot. [Administrative] 4.9 Use a platform ladder, mobile scaffold or aerial lift for longer jobs instead of a straight ladder. [Substitution] 4.10 Use Type I, IA or IAA ladders in good condition. Tag and remove any damaged ladder. [Engineering] 4.11 Set extension ladders at a 4 to 1 angle on firm, level ground, secured, and reaching 3 feet above the landing. [Engineering] 4.12 Use ladders only for short, light work. Do not carry heavy or awkward loads up a ladder. [Administrative] 4.13 Keep three points of contact and your belt buckle between the stiles. Do not overreach. [Administrative]	**Unlikely / Serious injury**	
5	Leak test, commission and check for carbon monoxide	Pressure testing Gas and fuel lines Fire and emergencies Rules: 29 CFR 1926 Subpart F	**High Unlikely / Fatality**	5.1 Test with water instead of air or gas where the system allows it. Never put water in refrigerant pipework, which is tested with dry nitrogen. [Substitution] 5.2 Keep people out of the test area with signs and barriers. [Engineering (guarding)] 5.3 Use a calibrated gauge and a relief valve set to protect the system. [Engineering] 5.4 Test to the pressure the system calls for and hold it for the set time. Never go over. [Administrative] 5.5 Release the pressure fully before tightening anything or fixing leaks. [Administrative] 5.6 Isolate and purge the line before work, with the owner's approval. [Elimination] 5.7 Lock off and tag the isolation valve. [Engineering (guarding)] 5.8 Check for leaks with a gas detector before and during work, and ventilate the area. [Engineering] 5.9 Only licensed gas fitters work on gas lines. [Administrative] 5.10 Remove ignition sources: no smoking, no hot work and no sparking tools near the line. [Administrative] 5.11 Provide fire extinguishers suited to the site, checked and easy to reach. [Engineering]	**Medium Rare / Fatality**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				5.12 Keep exits and escape routes clear and signed. [Engineering] 5.13 Have a site emergency plan: alarm, exits, assembly point and emergency contacts. [Administrative] 5.14 Keep a stocked first aid kit and at least one trained first aider on site. [Administrative] 5.15 Know the site address and how emergency services get in. Call 911. [Administrative]		
6	Remove old unit and clean up	Poor housekeeping and waste	**Medium Likely / Minor injury**	6.1 Order materials to size and send packaging back where you can. [Elimination] 6.2 Put dumpsters and waste chutes close to the work. [Engineering] 6.3 Clean as you go, and do a full clean up at the end of each day. [Administrative] 6.4 Keep exits, stairs and walkways clear at all times. [Administrative] 6.5 Stack materials neatly on level ground, away from edges. [Administrative] 6.6 Wear gloves when handling waste. [PPE]	**Low Unlikely / Minor injury**	Site supervisor

Risk key: risk = likelihood x consequence on a 5 x 5 matrix. Low, Medium, High, Critical. Work must not start while the risk after controls is high or above. Controls are listed in order of the hierarchy of controls: Elimination, Substitution, Engineering (guarding), Engineering, Administrative, PPE.

3. PPE AND PERMITS

Required PPE	Permits and plans
Safety-toe boots (ASTM F2413) Work gloves Safety glasses (ANSI Z87.1) N95 respirator Rubber insulating gloves Arc flash PPE (NFPA 70E) Half-face respirator (P100 cartridges) Coveralls Cut-resistant gloves Knee pads Hard hat (ANSI Z89.1) Welding gloves Face shield (ANSI Z87.1)	Lockout/tagout (1926.417) Hot work permit (fire watch at least 60 minutes after, NFPA 51B)

4. PLANT AND EQUIPMENT

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
Hand tools					

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
ProPress tool					
Electrical test meter		Rated for the voltage and category (CAT III or IV), inspected before each use, and checked on a known source before and after testing (NFPA 70E)			
Trailer					

5. TRAINING REQUIRED FOR THIS WORK

- Qualified person training for work on or near exposed energized parts (29 CFR 1926.416, NFPA 70E)
- Asbestos awareness training, plus class-specific training for Class I to III work (29 CFR 1926.1101(k)(9)); respirator fit test and medical evaluation (29 CFR 1910.134)
- Ladder safety training by a competent person (29 CFR 1926.1060)

6. CREW TRAINING AND CERTIFICATIONS

Crew listed at sign-on below, with ticket and licence numbers.

7. EMERGENCY ARRANGEMENTS

Emergency number	911	**First aid kit**	In the work vehicle
Fire extinguisher	In the work vehicle	**Alarm and evacuation**	Shout for help and stop work. Make the area safe and go to the assembly point. Call the emergency number and send someone to meet the ambulance.
Reporting incidents	Report a fatality to OSHA within 8 hours, and an in-patient hospitalization, amputation or eye loss within 24 hours.		

8. MONITORING, REVIEW AND LEGAL BASIS

A competent person inspects the job site, materials and equipment before work each day and as conditions change (29 CFR 1926.20(b)(2)). Any time this JHA is revised, the affected crew is re-briefed and signs again.

Legal basis: OSH Act Section 5(a)(1) and 29 CFR 1926, Safety and Health Regulations for Construction (incl. 1926.20 and 1926.21). OSHA requires employers to find and fix hazards and to train workers on them. A JHA breaks the job into steps, lists the hazards in each step and the controls that protect the crew. General contractors often require one before you start.

Keep this JHA on site during the job, and keep it with the training and inspection records for at least 1 year after the job (longer if your state plan or general contractor requires it). OSHA does not set a retention period for JHAs themselves.

9. REVISION HISTORY

Rev	Date	By	What changed
1	Nov 9, 2026		First issue

Rev	Date	By	What changed

10. SIGN-OFF

	Name	Signature	Date	
Prepared by				
Supervisor				
General contractor review				Accepted for use: Yes / No

By signing below, each crew member confirms they were trained on the hazards and controls in this JHA before work started, and will follow it. Stop work and tell the supervisor if conditions change.

Name	Role / company	Tickets / licences	Signature	Date

Name	Role / company	Tickets / licences	Signature	Date