

Installation Manual

NPE Condensing Water Heaters

Model

NPE-180A2
NPE-210A2
NPE-240A2
NPE-150S2
NPE-180S2
NPE-210S2
NPE-240S2



* Lead Free

Keep this manual near this water heater for future reference whenever maintenance or service is required.

* The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.



WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

What to do if you smell gas

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

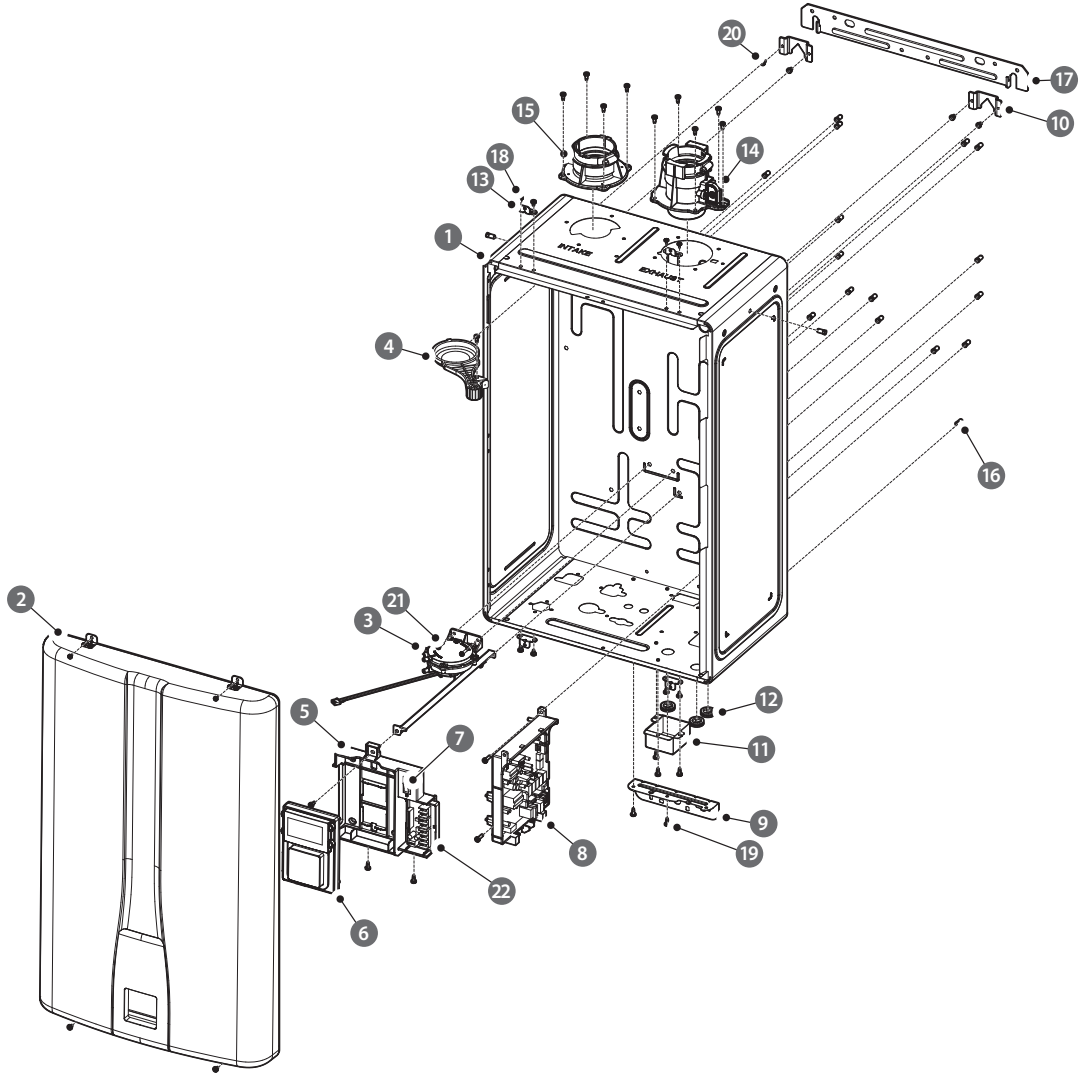
The installation must conform with local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 and/or CSA B149.1, Natural Gas and Propane Installation Code.

When applicable, the installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 and/or CAN/CSA Z240 MH Series, Manufactured Home.

Do not install this water heater in a recreational vehicle, trailer, boat or other vehicular type unit as it will result in a Carbon Monoxide Poisoning Hazard.

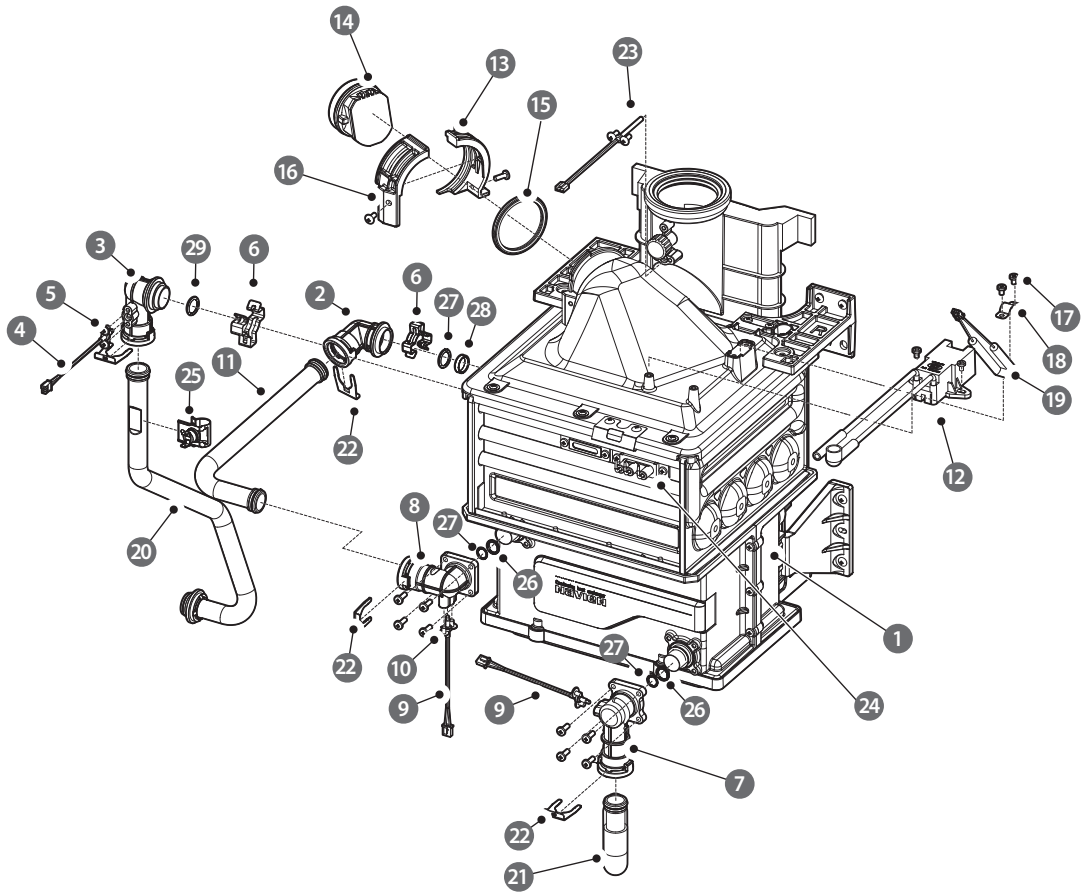
7.5 Component Assembly Diagrams and Parts Lists

7.5.1 Case Assembly



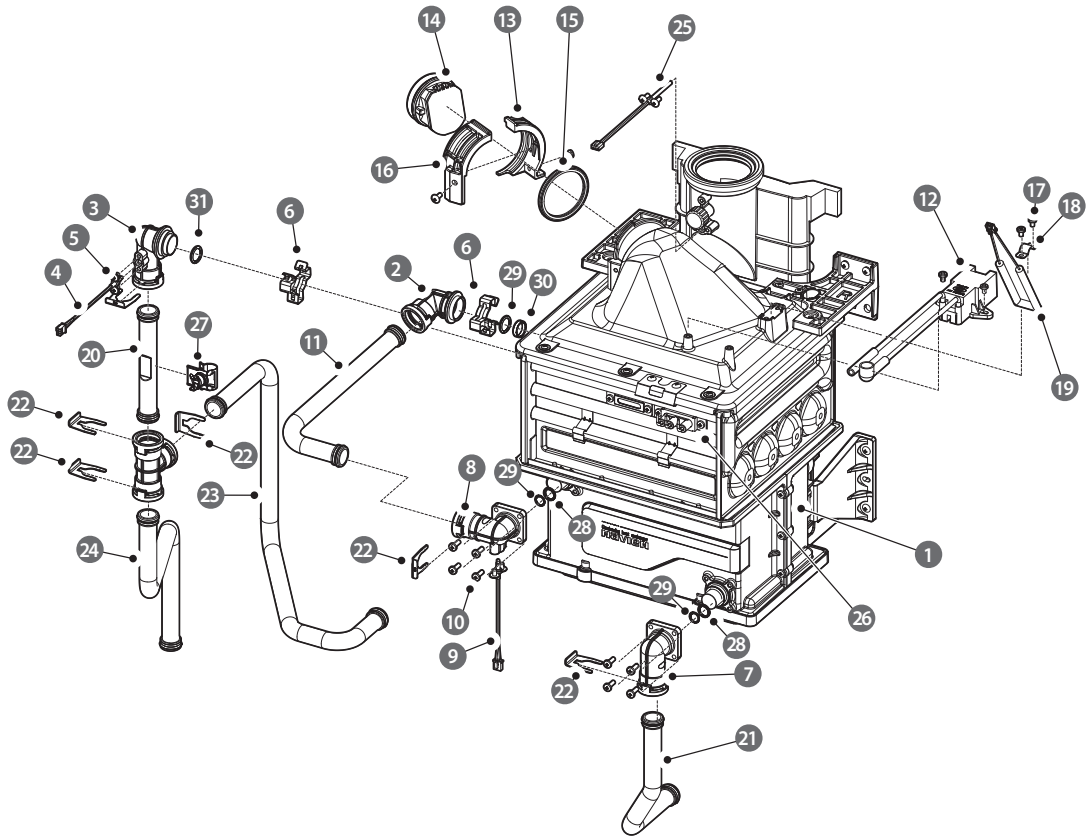
| # | Description | Service Code | Part # | Remark |
|----|--------------------------|--------------|-----------|-----------------------------|
| 1 | Case | - | 20049732* | NPE-180A2/210A2/240A2 |
| | | - | 20049515* | NPE-150S2/180S2/210S2/240S2 |
| 2 | Cover | 30026143A | 30024855* | |
| 3 | Air Pressure Sensor | 30021100A | 30021100* | |
| 4 | Intake Air Filter | 30016248B | 30016248* | |
| 5 | Panel Bracket | - | 20049470* | |
| 6 | Front Panel | 30024955A | 30024955* | |
| 7 | Power Switch | 30009482A | 30009482* | |
| 8 | PCB | 30024835A | 30024835* | NPE-180A2/210A2/240A2 |
| | | 30024837A | 30024837* | NPE-150S2/180S2/210S2/240S2 |
| 9 | Case Bracket (Lower) | - | 20048214* | |
| 10 | Case Bracket (Upper) | - | 20049507* | |
| 11 | Junction Box | - | 20046065* | |
| 12 | Rubber Ring | - | 20025127* | |
| 13 | Case Bracket (Lock) | - | 20049636* | |
| 14 | Exhaust Duct Assembly | 30024848A | 30024848* | |
| 15 | Intake Air Duct Assembly | 30008662B | 30008662* | |
| 16 | Pop nut | - | 20047199* | |
| 17 | Wall Bracket | - | 20007610* | |
| 18 | Screw, STS410, 4x6 | - | 20050522* | |
| 19 | Screw, STS410, 4x10 | 20049000A | 20049000* | |
| 20 | Screw, STS430, M4x6 | - | 20050523* | |
| 21 | Screw, S18A, M4x14 | - | 20041463* | |
| 22 | Hotbutton | 30025294A | 30025294* | |

7.5.2 Burner Assembly (NPE-180A2/ 210A2/ 240A2)



| # | Description | Service Code | Part # | Remark |
|----|--------------------------|--------------|-----------|-----------------|
| 1 | Heat Exchanger Assembly | 30026111A | 30024850* | NPE-210A2/240A2 |
| | | 30026110A | 30025104* | NPE-180A2 |
| 2 | SC-Ex Inlet Adaptor | - | 20049491* | |
| 3 | SC-Ex Outlet Adaptor | - | 30024763* | |
| 4 | Thermistor | 30008366A | 30008366* | |
| 5 | Screw, S10A, 4x6 | 20017962A | 20017962* | |
| 6 | Fastener | 20007853A | 20007853* | |
| 7 | Flow Sensor Assembly | 30024866A | 30024866* | |
| 8 | Latent-Ex Outlet Adaptor | - | 30024764* | |
| 9 | Thermistor | 30008366A | 30008366* | |
| 10 | Screw, S10A, 4x6 | 20017962A | 20017962* | |
| 11 | H-Ex Middle Pipe | - | 30024769* | NPE-210A2/240A2 |
| | | - | 30024768* | NPE-180A2 |
| 12 | Ignition Transformer | 30010455A | 30010455* | |
| 13 | Fan Bracket (R) | - | 20022096* | |
| 14 | Fan Damper | 30008825A | 30008825* | |
| 15 | Fan Packing | - | 20022744* | |
| 16 | Fan Bracket (F) | 20022095A | 20022095* | |
| 17 | Screw, S18A, M4x6 | - | 20038859* | |
| 18 | Burner Fuse Bracket | - | 20050642* | |
| 19 | Burner Fuse | 30025036A | 30025036* | |
| 20 | Hot Water Outlet Pipe | 30024771A | 30024771* | NPE-210A2/240A2 |
| | | 30024770A | 30024770* | NPE-180A2 |
| 21 | Cold Inlet Pipe | 30024767A | 30024767* | NPE-210A2/240A2 |
| | | 30024766A | 30024766* | NPE-180A2 |
| 22 | Pipe Clip | 20045992A | 20045992* | |
| 23 | Thermistor (Exhaust) | 30009478A | 30009478* | |
| 24 | Igniter | 30025442A | 30025442* | |
| 25 | High Limit Switch | 30023954A | 30023954* | |
| 26 | Packing (Ø26.5x2.4t) | - | 20006868* | |
| 27 | O-ring (Ø17.5x2.7t) | 20006949A | 20006949* | |
| 28 | Backup Ring | - | 20018744* | |
| 29 | O-ring (Ø21.7xØ3.5) | - | 20033699* | |

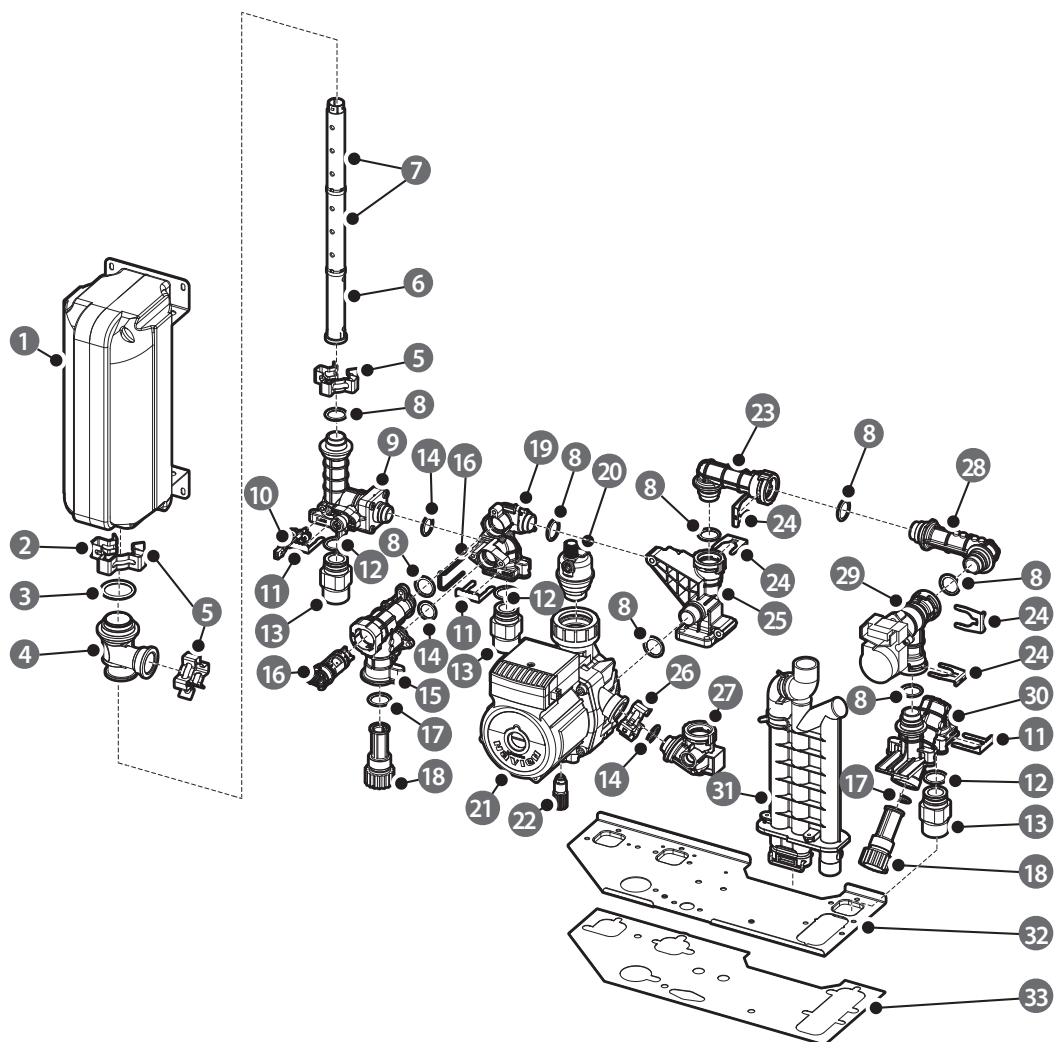
7.5.3 Burner Assembly (NPE-150S2/180S2/ 210S2/ 240S2)



| # | Description | Service Code | Part # | Remark |
|----|--------------------------|--------------|-----------|-----------------|
| 1 | Heat Exchanger Assembly | 30026111A | 30025252* | NPE-210S2/240S2 |
| | | 30026110A | 30025110* | NPE-180S2 |
| | | 30026109A | 30025477* | NPE-150S2 |
| 2 | SC-Ex Inlet Adaptor | - | 20049491* | |
| 3 | SC-Ex Outlet Adaptor | - | 30024763* | |
| 4 | Thermistor | 30008366A | 30008366* | |
| 5 | Screw, S10A, 4x6 | 20017962A | 20017962* | |
| 6 | Fastener | 20007853A | 20007853* | |
| 7 | Latent-Ex Inlet Adaptor | - | 20049517* | |
| 8 | Latent-Ex Outlet Adaptor | - | 30024764* | |
| 9 | Thermistor | 30008366A | 30008366* | |
| 10 | Screw, S10A, 4x6 | 20017962A | 20017962* | |

| # | Description | Service Code | Part # | Remark |
|----|----------------------------|--------------|-----------|-----------------------|
| 11 | H-Ex Middle Pipe | - | 30024769* | |
| | | - | 30024768* | |
| | | - | 30025435* | |
| 12 | Ignition Transformer | 30010455A | 30010455* | |
| 13 | Fan Bracket (R) | - | 20022096* | |
| 14 | Fan Damper | 30008825A | 30008825* | |
| 15 | Fan Packing | - | 20022744* | |
| 16 | Fan Bracket (F) | 20022095A | 20022095* | |
| 17 | Screw, S18A, M4×6 | - | 20038859* | |
| 18 | Burner Fuse Bracket | - | 20050642* | |
| 19 | Burner Fuse | 30025036A | 30025036* | |
| 20 | Heat Exchanger Outlet Pipe | 30024780A | 30024780* | NPE-180S2/210S2/240S2 |
| | | 30024779A | 30024779* | NPE-150S2 |
| 21 | Cold Inlet Pipe | 30024778A | 30024778* | NPE-210S2/240S2 |
| | | 30024777A | 30024777* | NPE-180S2 |
| | | 30024776A | 30024776* | NPE-150S2 |
| 22 | Clip | 20045992A | 20045992* | |
| 23 | Mixing Pipe | 30024784A | 30024784* | NPE-210S2/240S2 |
| | | 30024783A | 30024783* | NPE-180S2 |
| | | 30024782A | 30024782* | NPE-150S2 |
| 24 | Hot Water Outlet Pipe | 30024787A | 30024787* | NPE-210S2/240S2 |
| | | 30024786A | 30024786* | NPE-180S2 |
| | | 30024785A | 30024785* | NPE-150S2 |
| 25 | Thermistor (Exhaust) | 30009487A | 30009478* | |
| 26 | Igniter | 30025442A | 30025442* | |
| 27 | High Limit Switch | 30023954A | 30023954* | |
| 28 | Packing (Ø26.5x2.4t) | - | 20006868* | |
| 29 | O-ring (Ø17.5x2.7t) | 20006949A | 20006949* | |
| 30 | Backup Ring | - | 20018744* | |
| 31 | O-ring (Ø21.7xØ3.5) | - | 20033699* | |

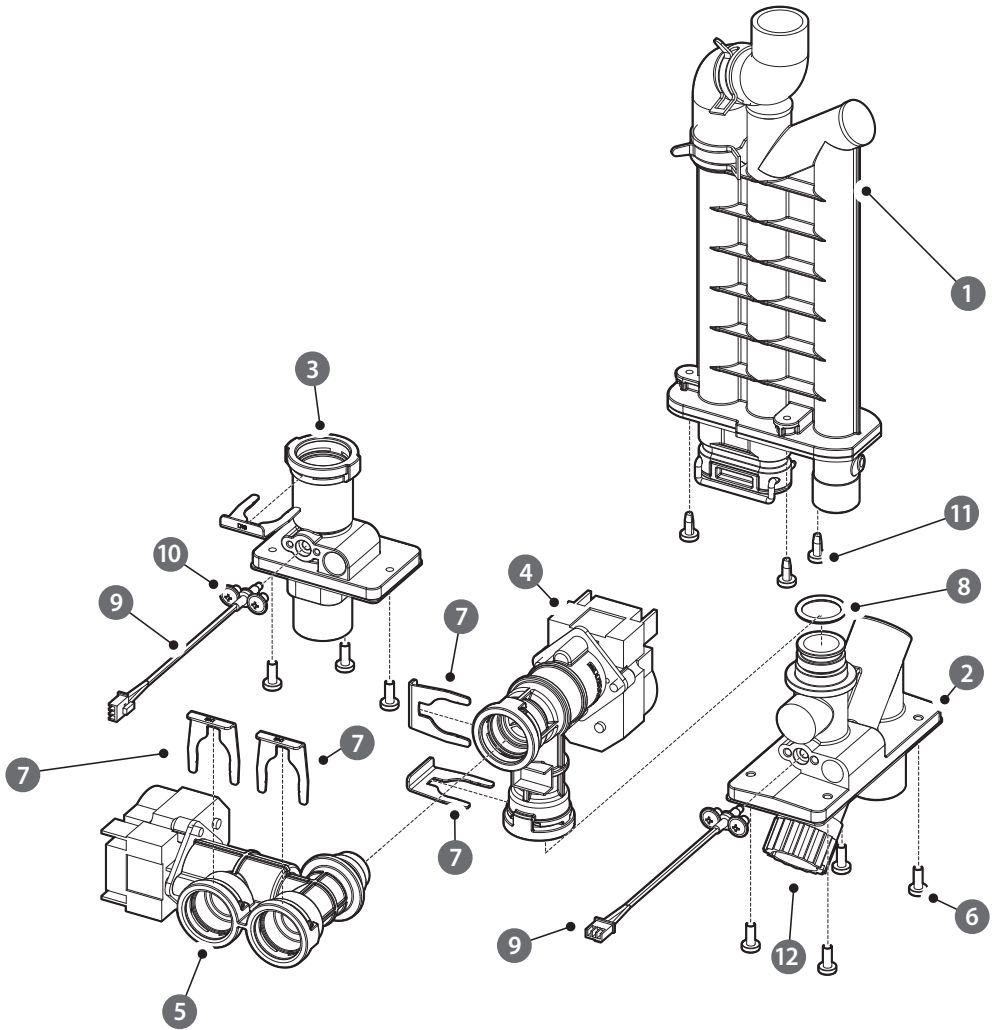
7.5.4 Waterway Assembly (NPE-180A2/210A2/240A2)



| # | Description | Service Code | Part # | Remark |
|---|---------------------|--------------|-----------|--------|
| 1 | Buffer Tank | 30016125A | 30023708* | |
| 2 | Fastener | 20017724A | 20017724* | |
| 3 | O-RING (P29) | 20017923A | 20017923* | |
| 4 | Buffer Tank Adapter | 20035697A | 20035697* | |
| 5 | Fastener | - | 20017726* | |
| 6 | Buffer Tank Pipe A | - | 20017759* | |
| 7 | Buffer Tank Pipe B | - | 20017760* | |
| 8 | O-RING (P18) | 20006947A | 20006947* | |

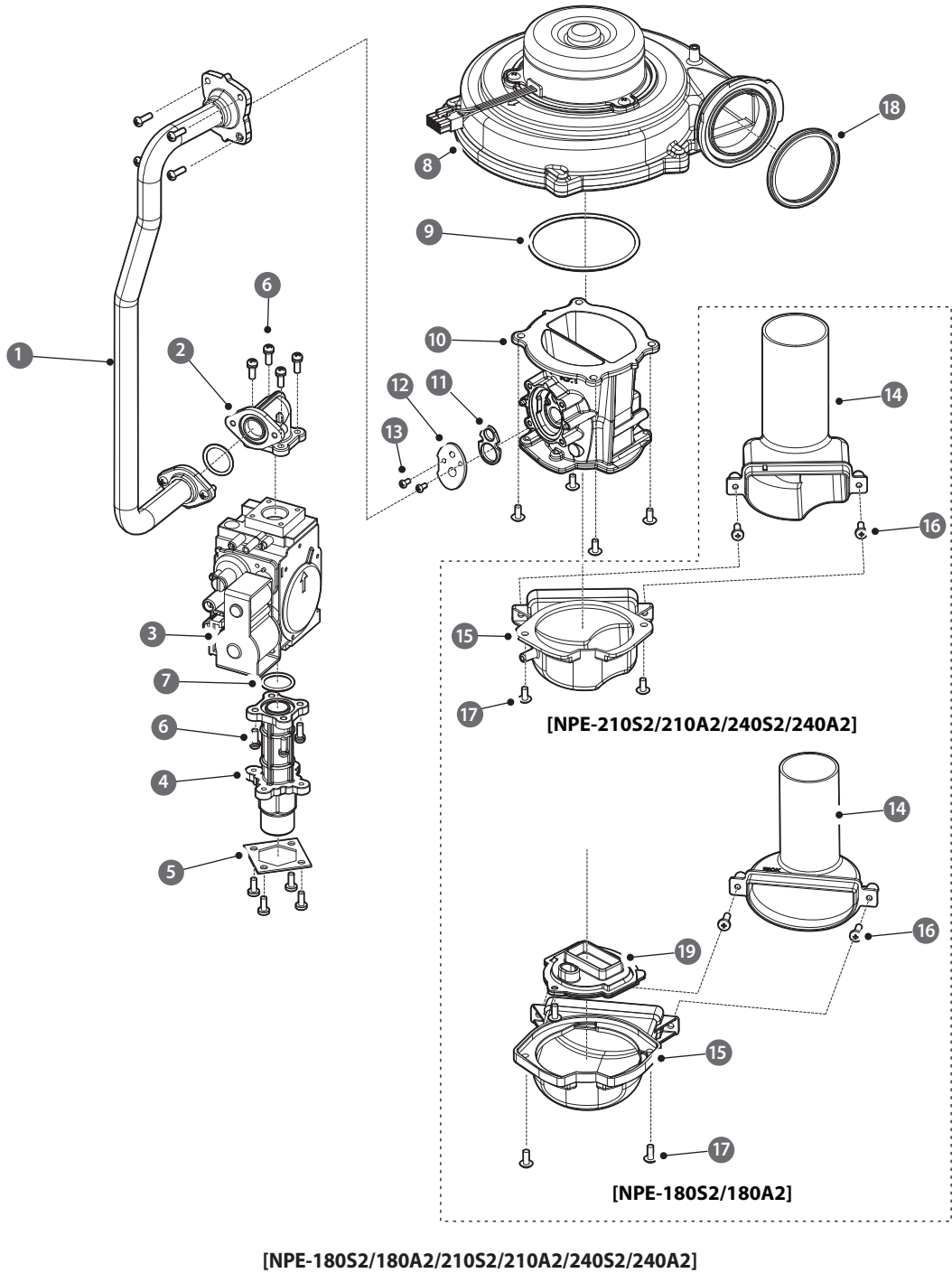
| # | Description | Service Code | Part # | Remark |
|----|--------------------------|--------------|------------|--------|
| 9 | Hot Water Outlet Adapter | - | 30008338* | |
| 10 | Thermistor | 30008366A | 30008366* | |
| 11 | Clip | 20007733B | 20007733* | |
| 12 | O-RING (P20) | 20017212A | 20017212* | |
| 13 | Pipe Adapter | 20024496A | 20024496* | |
| 14 | O-RING (P16) | 20017210A | 20017210* | |
| 15 | Check Valve Adapter | 20048412A | 20048412* | |
| 16 | Check Valve | - | 30024442a* | |
| 17 | O-RING (P19) | 20017211A | 20017211* | |
| 18 | Water Filter | 30008171A | 30008171* | |
| 19 | Return Connect Adapter | 20048405A | 20048405* | |
| 20 | Pump Air Separator | 30014451A | 30013056* | |
| 21 | Circulation Pump | | 30008355* | |
| 22 | Drain Plug | | 30008630* | |
| 23 | Pump Connect Adapter | 20048418A | 20048418* | |
| 24 | Clip | 20045992A | 20045992* | |
| 25 | Pump Inlet Adapter | 20048414A | 20048414* | |
| 26 | Fastener | 20007859A | 20007859* | |
| 27 | Pump Outlet Adapter | 20048419A | 20048419* | |
| 28 | WAV Outlet Adapter | 20048415A | 20048415* | |
| 29 | Water Adjust Valve | 30024183A | 30024183* | |
| 30 | Cold Water Adapter | 20048454A | 20048454* | |
| 31 | Syphon | 30024921A | 30024921* | |
| 32 | Bracket | - | 20048396* | |
| 33 | Bracket Packing | - | 20048400* | |

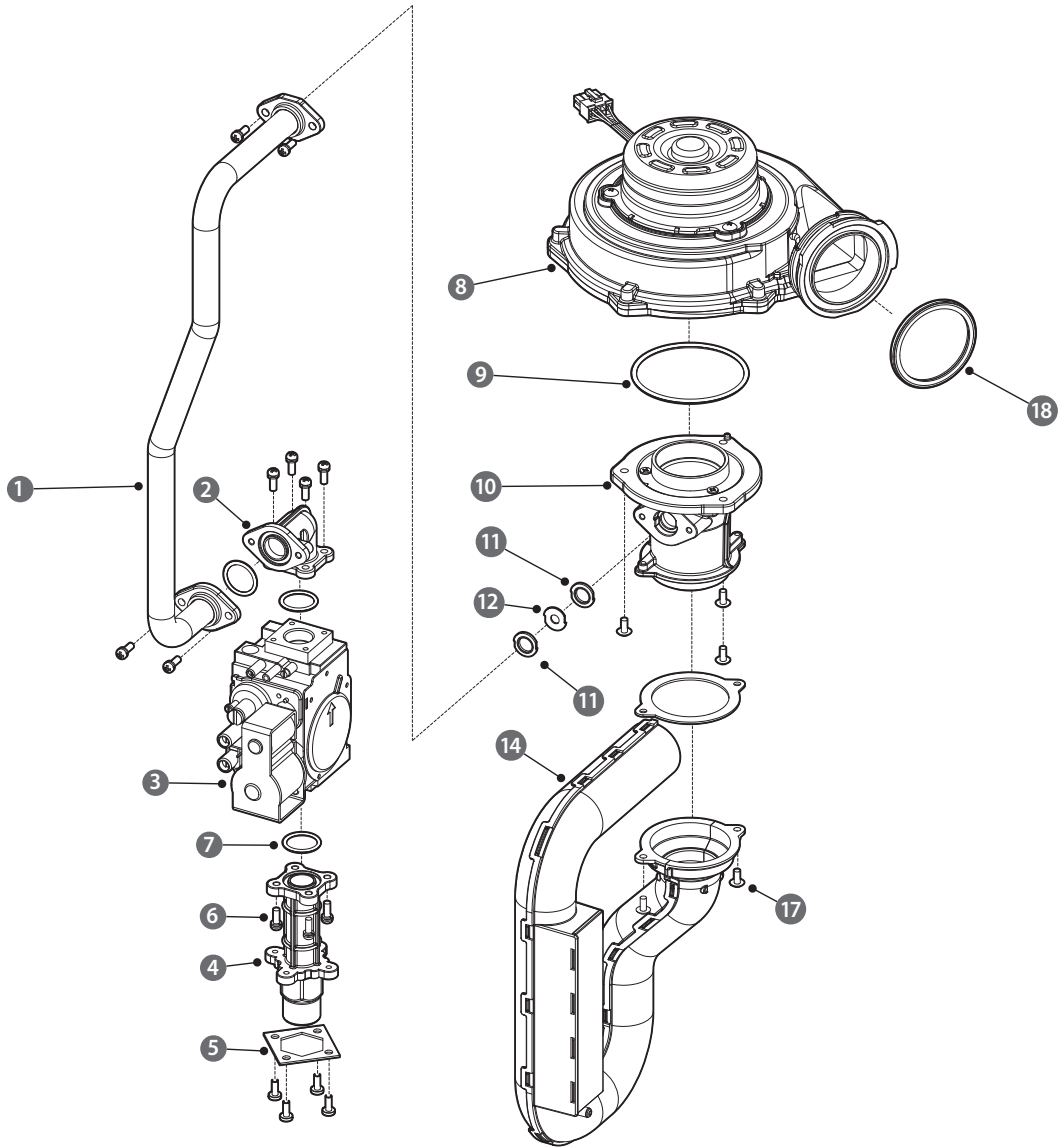
7.5.5 Waterway Assembly (NPE-150S2/180S2/210S2/240S2)



| # | Description | Service Code | Part # | Remark |
|----|--|--------------|-----------|--------|
| 1 | Syphon | 30024921A | 30024921* | |
| 2 | Cold Water Inlet Adapter | 30024923A | 30024923* | |
| 3 | Hot Water Outlet Adapter | - | 30024924* | |
| 4 | Water Adjust Valve (Built in Flow Sensor) | 30022123A | 30022123* | |
| 5 | Mixing Valve | 30022124A | 30022124* | |
| 6 | Screw, STS430, M4×10 | - | 20038758* | |
| 7 | Clip | 20045992A | 20045992* | |
| 8 | O-RING (P18) | 20006947A | 20006947* | |
| 9 | Thermistor | 30008366A | 30008366* | |
| 10 | Screw, S10A, M4×6 | - | 20027618* | |
| 11 | Screw, STS410, 4×10 | 20049000A | 20049000* | |
| 12 | Water Filter | 30008171A | 30008171* | |

7.5.6 Fan (Gas) Assembly





[NPE-150S2]

| # | Description | Service Code | Part # | Remark |
|----|---------------------------|--------------|-----------|---|
| 1 | Gas Pipe | 30024773A | 30024773* | NPE-210S2/240S2/210A2/240A2 |
| | | 30024772A | 30024772* | NPE-180S2/180A2 |
| | | 30025069A | 30025069* | NPE-150S2 |
| 2 | Gas Connector | 20018430A | 20018430* | |
| 3 | Gas Valve | 30011586B | 30011586* | |
| 4 | Gas Inlet Adapter | 20023809A | 20023809* | |
| 5 | Gas Inlet Adapter Packing | - | 20023581* | |
| 6 | Screw, S10A, M4x12 | 20006390A | 20006390* | |
| 7 | O-Ring (P20) | 20006934A | 20006934* | |
| 8 | Fan Assembly | 30015421A | 30015421* | NPE-150S2 |
| | | 30025295A | 30025295* | NPE-180S2/180A2/210S2/210A2/ 240S2/240A2 |
| 9 | O-Ring (G70) | 20007001A | 20007001* | NPE-150S2 |
| | O-Ring (G75) | 20018079A | 20018079* | NPE-180S2/180A2/210S2/210A2/ 240S2/240A2 |
| 10 | Single Venturi | 30014688A | 30014688* | NPE-150S2 |
| | Dual Venturi | 30024967A | 30024967* | NPE-180S2/180A2 |
| | | 30025251A | 30025251* | NPE-210S2/240S2/210A2/240A2 |
| 11 | Venturi Packing | 20022660A | 20022660* | |
| 12 | Gas Orifice | 20049501A | 20049501* | NPE-210S2/240S2/210A2/240A2 (NG) |
| | | 20050546A | 20050546* | NPE-210S2/240S2/210A2/240A2 (LP) |
| | | 20049500A | 20049500* | NPE-180S2/180A2 (NG) |
| | | 20050545A | 20050545* | NPE-180S2/180A2 (LP) |
| | | 20029420B | 20029420* | NPE-150S2 (NG) |
| | | 20034178A | 20034178* | NPE-150S2 (LP) |
| 13 | Screw, S10A, M3x6, 3 | - | 20018065* | |
| 14 | Silence | - | 20032570* | NPE-210S2/240S2/210A2/240A2 |
| | | - | 20031242* | NPE-180S2/180A2 |
| 15 | Silence Adapter | - | 20032569* | NPE-210S2/240S2/210A2/240A2 |
| | | - | 20049499* | NPE-180S2/180A2 |
| 16 | Screw, S10A, 4x12 | - | 20006555* | |
| 17 | Screw, S18A, M4x10 | - | 20034293* | |
| 18 | Fan Packing | - | 20022744* | |
| 19 | Reducer | - | 30024970* | NPE-180S2/180A2 |