PORSCHE

Flow charts of PDK fault codes (change status listing)

(see also Technical Information Gr. 3, No. 35/09)

Date	Change in flow chart ...
09/2009	First publication
04/2010	EF - Electrical faults
	SF4 - Temperature sensor
	SF5 - Software faults
05/2011	EF - Electrical faults
	SF3 - Pressure sensor
	SF4 - Temperature sensor
06/2011	SF3 - Pressure sensor

PORSCHE

Electrical faults

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

987 x 997

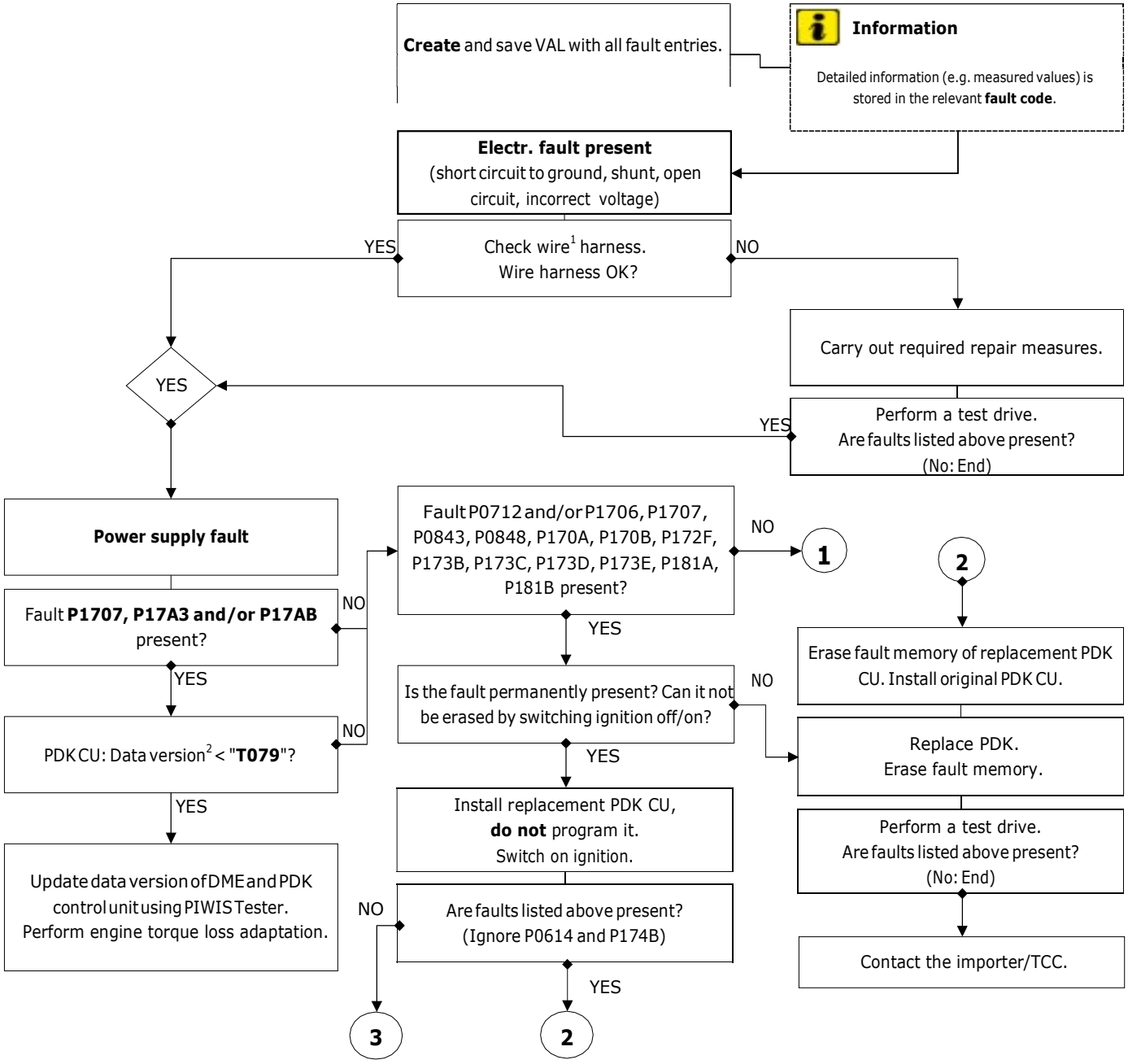
Flow chart
EF 9x7

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'



DME CU = DME control unit
PDK CU = PDK control unit
Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718
PDK = Porsche Doppelkupplung

[1] Check wire harness continuity; check plug connections on transmission and wire harness side for damaged connectors/sleeves and soiling; check that plug connections are seated correctly.

[2] Data version in PDK control unit under => 'Actual values' => 'Identification' in PIWIS Tester and in VAL.

Electrical faults

Flow chart
EF 9x7

981 + 997

1

Fault P0754 and/or P0759, P0960, P0962, P0963, P0964, P0966, P0967, P0968, P0970, P0971, P0973, P0974, P0976, P0977, P17A1, P17A2, P17A3, P17A4, P17A5, P17A6, P17A9, P17AA, P17AB, P17AC, P17AD, P17AE, P1830, P1831, P1832, P1833, P1838, P1839, P1841, P1842, P183A, P183B P2718, P2720, P2721, P2727, P2729, P2730, P2736, P2738, P2739 present?

NO → 4

YES

Is the fault permanently present? Can it not be erased by switching ignition off/on?

NO → Remove oil pan, pull off wire harness on electrohydraulic CU (loosen CU if necessary).

YES

Install replacement PDK CU, **do not** program it. Switch on ignition.

Are faults listed above present? (Ignore P0614 and P174B)

NO → 3

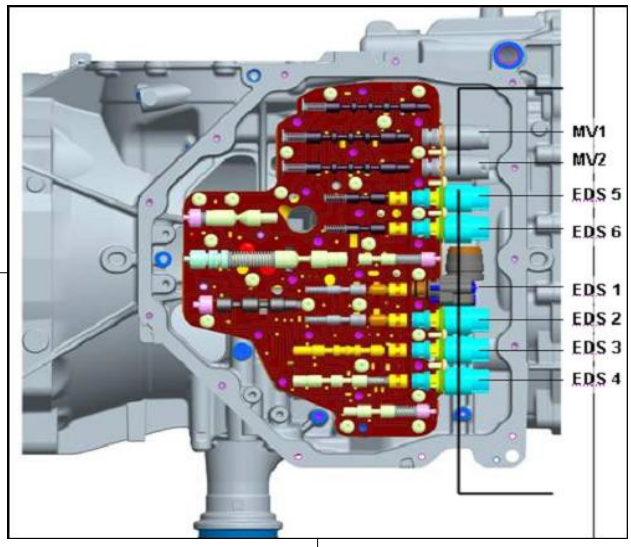
YES

Erase fault memory of replacement PDK CU. Install original PDK CU.

Remove oil pan, pull off wire harness on electrohydraulic CU (loosen CU if necessary).

Measure resistance in electrohydraulic CU according to fault code on EPA or SV.

Required **resistance values**:
EPA 1 ... to EPA 6 = **5 - 6 Ohm**
SV 1, SV 2 = **10 - 12 Ohm**



NO

Resistance measured values OK?

YES

Replace electrohydraulic CU. Erase fault memory.

Replace PDK. Erase fault memory.

Perform a test drive. Are faults listed above present? (No: End)

YES

Contact the importer/TCC.

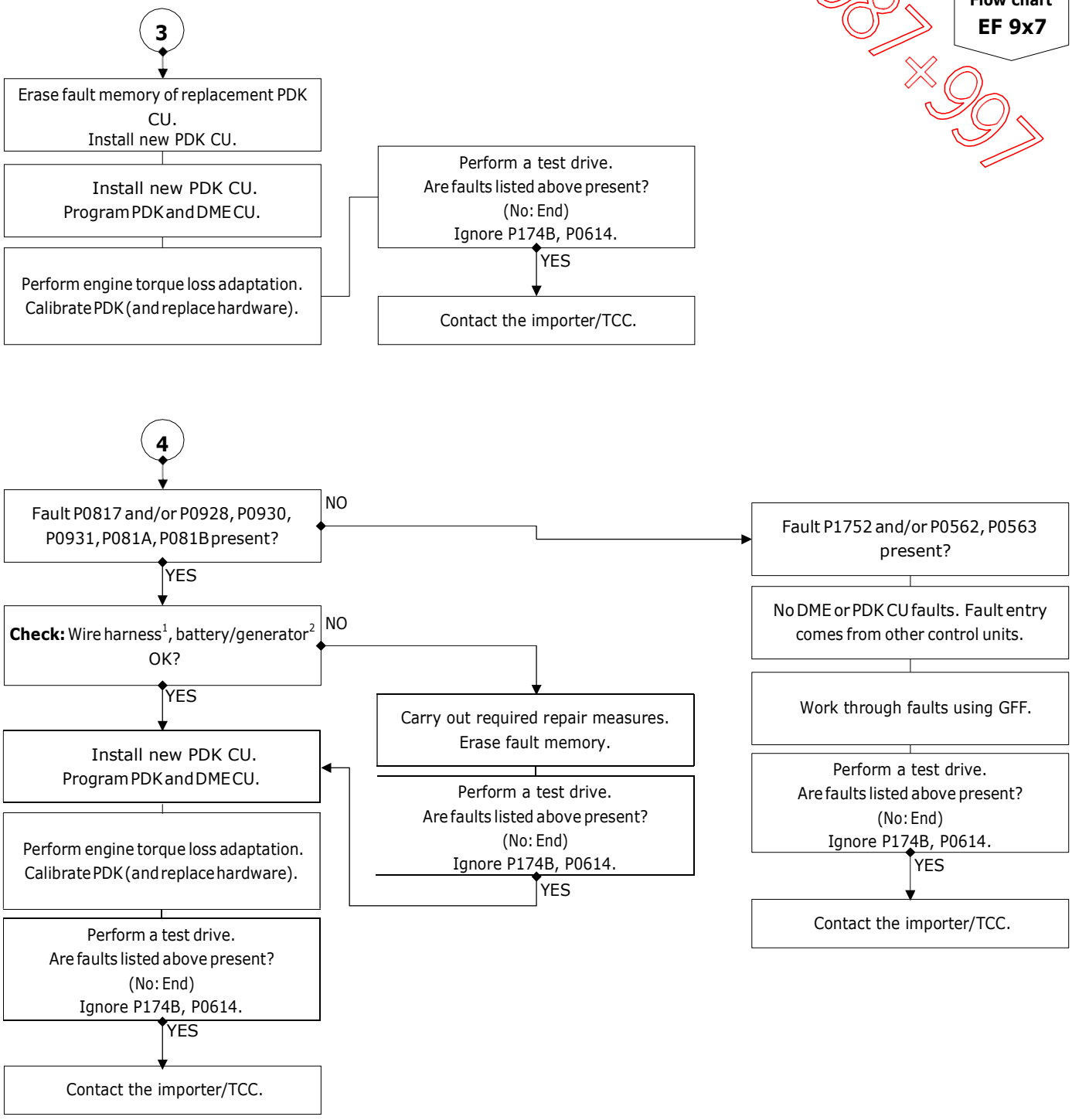
DME CU = DME control unit
PDK CU = PDK control unit
Electrohydraulic CU = Electrohydraulic control unit
EPA = Electric pressure adjuster

GFF = Guided Fault Finding using PIWIS Tester 9818
PDK = Porsche Doppelkupplung
SV = Solenoid valve

Electrical faults

Flow chart
EF 9x7

981 x 991



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EPA = Electric pressure adjuster

GFF = Guided Fault Finding using PIWIS Tester 9818
PDK = Porsche Doppelkupplung
SV = Solenoid valve

[1] Check wire harness continuity; check plug connections on transmission and wire harness side for damaged connectors/sleeves and soiling; check that plug connections are seated

[2] Check function of ..., check for damage, continuity, charge state, etc.

Gear skip, engagement block - P176x

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

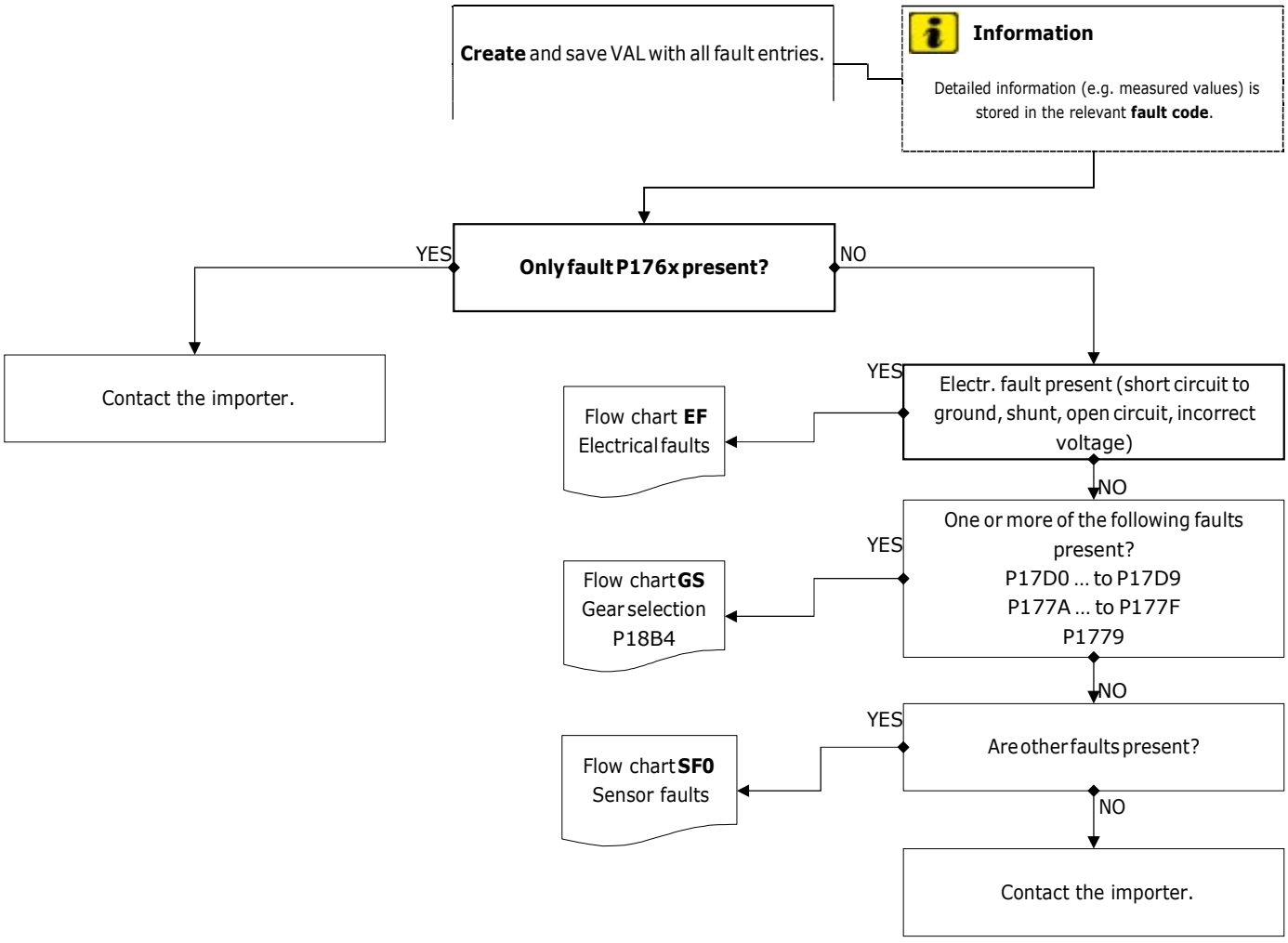
Flow chart EB

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'



GFF = Guided Fault Finding using PIWIS Tester 9718

PORSCHE

Sensor faults (preliminary work)

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

Flow chart SF0

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'

Create and save VAL with all fault entries.

Information

Detailed information (e.g. measured values) is stored in the relevant **fault code**.

Electr. fault present (short circuit to ground, shunt, open circuit, incorrect voltage)

YES → Flow chart **EF** Electrical faults

NO → One or more of the following faults present?
P17D0 ... to P17D9
P177A ... to P177F
P1779

YES → Flow chart **GS** Gear selection P18B4

NO → Which fault codes are displayed?

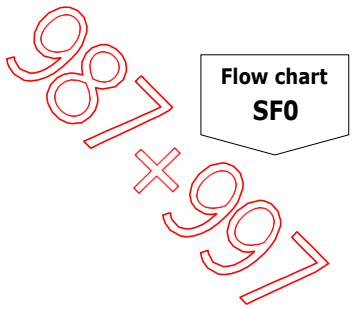
Reference for fault codes → (1)

Flow chart reference

- P1731 P1732 P1733 P1734 → Flow chart **SF1** Distance sensor
- P0730 P1743 P1744 P1745 → Possible consequential faults: P17F0 P17F1 P17F2 P17B5 P17B6 P17B7 P17B8 → Flow chart **SF2** Speed sensor
- P0841 P0846 P17B1 P17B2 P17B3 P17B4 P17BB P17BC P17BD P17BE → Possible consequential faults: P17F0 P17F1 P17F2 P17B5 P17B6 P17B7 P17B8 → Flow chart **SF3** Pressure sensor
- P0711 P172D P17F0 P17F1 P17F2 → Flow chart **SF4** Temperature sensor
- U0073 Uxxxx P0602 P0603 P0604 P0605 P0614 P0702 P1715 P1749 P174B P174C P174E P1870 P1871 P1872 P1897 P18A0 P18B0 P18B4 P18B5 P186F P189A → Flow chart **SF5** Software

GFF = Guided Fault Finding using PIWIS Tester 9718

Sensor faults (preliminary work)



1

Fault code	Flow chart
P0602	SF5 Software
P0603	SF5 Software
P0604	SF5 Software
P0605	SF5 Software
P0614	SF5 Software
P0702	SF5 Software
P0711	SF4 Temperature sensor
P0730	SF2 Speed sensor
P0841	SF3 Pressure sensor
P0846	SF3 Pressure sensor
P1715	SF5 Software
P1731	SF1 Distance sensor
P1732	SF1 Distance sensor
P1733	SF1 Distance sensor
P1734	SF1 Distance sensor
P1743	SF2 Speed sensor
P1744	SF2 Speed sensor
P1745	SF2 Speed sensor
P1749	SF5 Software
P1870	SF5 Software
P1871	SF5 Software
P1872	SF5 Software
P1897	SF5 Software
P172D	SF4 Temperature sensor
P174B	SF5 Software
P174C	SF5 Software
P174E	SF5 Software
P186F	SF5 Software
P189A	SF5 Software
P189C	SF5 Software
P189D	SF5 Software
P17B1	SF3 Pressure sensor
P17B2	SF3 Pressure sensor
P17B3	SF3 Pressure sensor
P17B4	SF3 Pressure sensor
P17BB	SF3 Pressure sensor
P17BC	SF3 Pressure sensor
P17BD	SF3 Pressure sensor
P17BE	SF3 Pressure sensor
P17F0	SF4 Temperature sensor
P17F1	SF4 Temperature sensor
P17F2	SF4 Temperature sensor
P18A0	SF5 Software
P18B0	SF5 Software
P18B4	SF5 Software
P18B5	SF5 Software
Uxxxx	SF5 Software
U0073	SF5 Software

PORSCHE

Distance sensor - P1731, P1732, P1733, P1734

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

Flow chart SF1

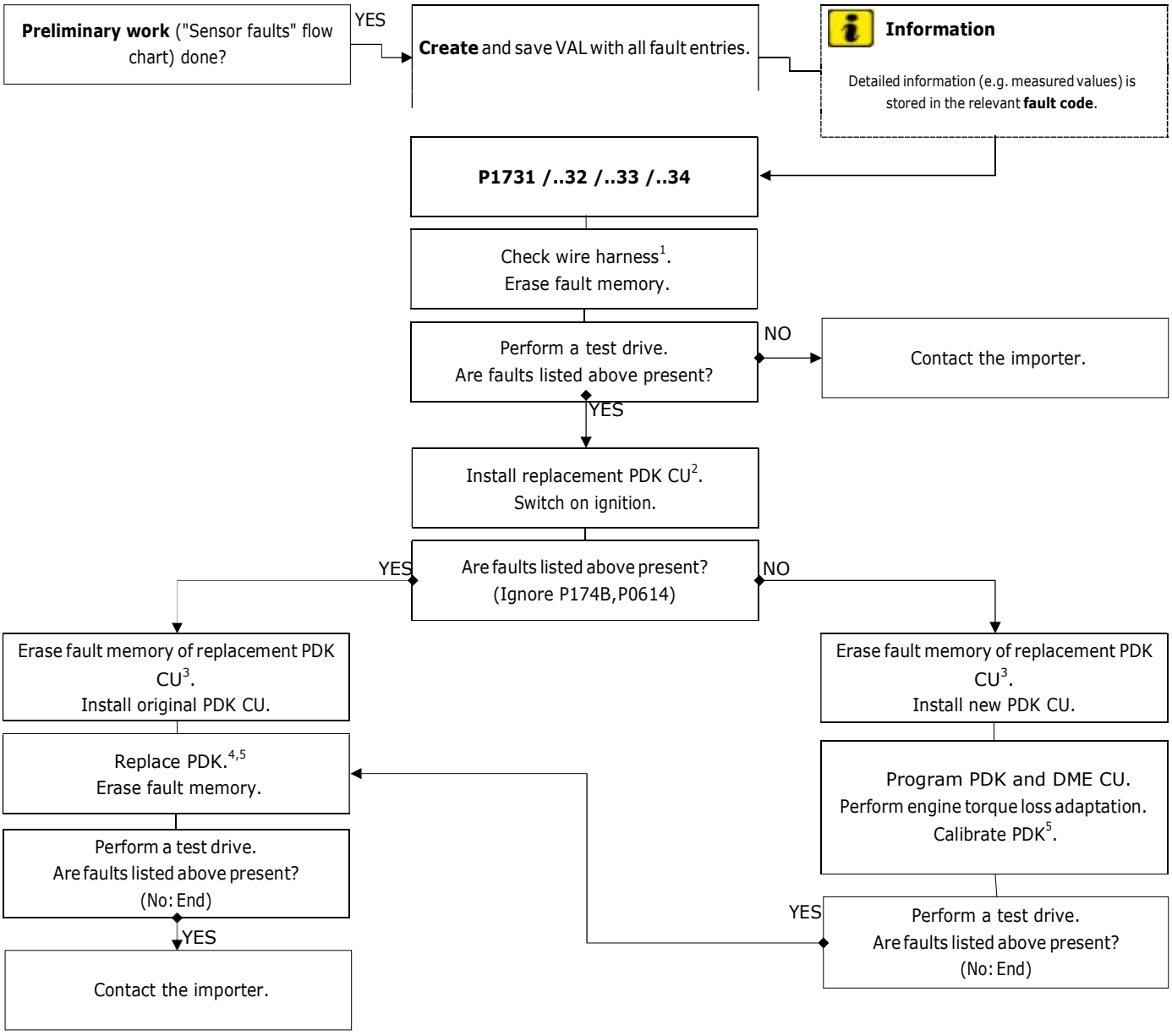
987 x 997

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

- ▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'
- ▶ Workshop Manual '373019 Removing and installing transmission control unit (PDK)'
- ▶ Workshop Manual '373419 Removing and installing PDK transmission'



DME CU = DME control unit PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

[1] Check wire harness continuity; disconnect and then reconnect plug connections, check for damage and soiling, clean if necessary.

[2] Replacement PDK CU: Control unit can be from another vehicle or new control unit. Do **not** program in either case.

[3] Re-install control unit taken from another vehicle.

[4] Perform engine torque loss adaptation and calibration after replacing parts.

[5] Calibrate: Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.

PORSCHE

Speed sensor - P0730, P1743, P1744, P1745

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

981 x 991

Flow chart SF2

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

- ▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'
- ▶ Workshop Manual '387719 Removing and installing electrohydraulic control unit'
- ▶ Workshop Manual '373419 Removing and installing PDK transmission'

DME CU = DME control unit PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

[1] Perform engine torque loss adaptation and calibration after replacing parts.

[2] Calibrate: Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.

[3] Replacement PDK CU: Control unit can be from another vehicle or new control unit. Do **not** program in either case.

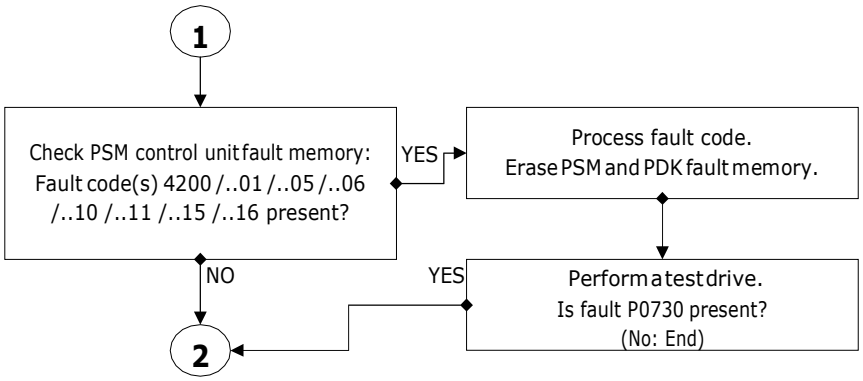
[4] Re-install control unit taken from another vehicle.

[5] Check wire harness continuity; check plug connections on transmission and wire harness side for damaged connectors/sleeves and soiling; check that plug connections are seated correctly.

Speed sensor - P0730, P1743, P1744, P1745

981 + 991

Flow chart
SF2



PORSCHE

Pressure sensor - P0841, P0846, P17B1/..B2/..B3/..B4, P17BB/..BC/..BD/..BE

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

Flow chart
PS3 9x7

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

- ▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'
- ▶ Workshop Manual '370235 Checking and topping up ATF (clutch fluid)'
- ▶ Workshop Manual '340135 Checking and topping up transmission oil'
- ▶ Workshop Manual '387719 Removing and installing electrohydraulic control unit'
- ▶ Workshop Manual '373419 Removing and installing PDK transmission'

Preliminary work ("Sensor faults" flow chart) done?

YES → **Create** and save VAL with all fault entries.

Information
Detailed information (e.g. measured values) is stored in the relevant **fault code**.

P0841, P0846, P17B1 /..B2 /..B3 /..B4, P17BB /..BC /..BD /..BE.

Oil level check[1]: Clutch and transmission. **Both** oil levels OK?

YES → P0841 **present by itself** or with P17B1 (with conseq. fault P17F0 /..F1 /..F2, P17B5 /..B6 /..B7 /..B8)?

NO → 2

YES → **Check transmission** number.
≥ CG 100 100 **6841**?
≥ CG 100 200 **2499**?
≥ CG 130 200 **4156**?
≥ CG 200 100 **2001**?
≥ CG 200 200 **2001**?
≥ CG 220 100 **2001**?
≥ CG 220 200 **2021**?

YES → 2

NO → Was electrohydraulic CU replaced before?

YES → 2

NO → Replace electrohydraulic CU[2]. Erase fault memory.

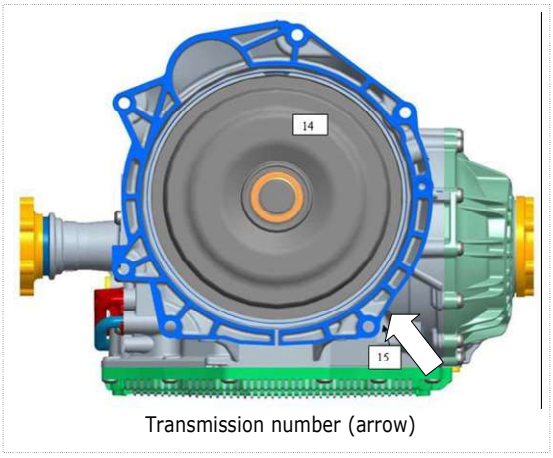
Perform a test drive. Are faults listed above present? (No: End)

YES → Only P17BB /..BC /..BD /..BE present?

YES → 4

NO → 5

NO → 1



Transmission number (arrow)

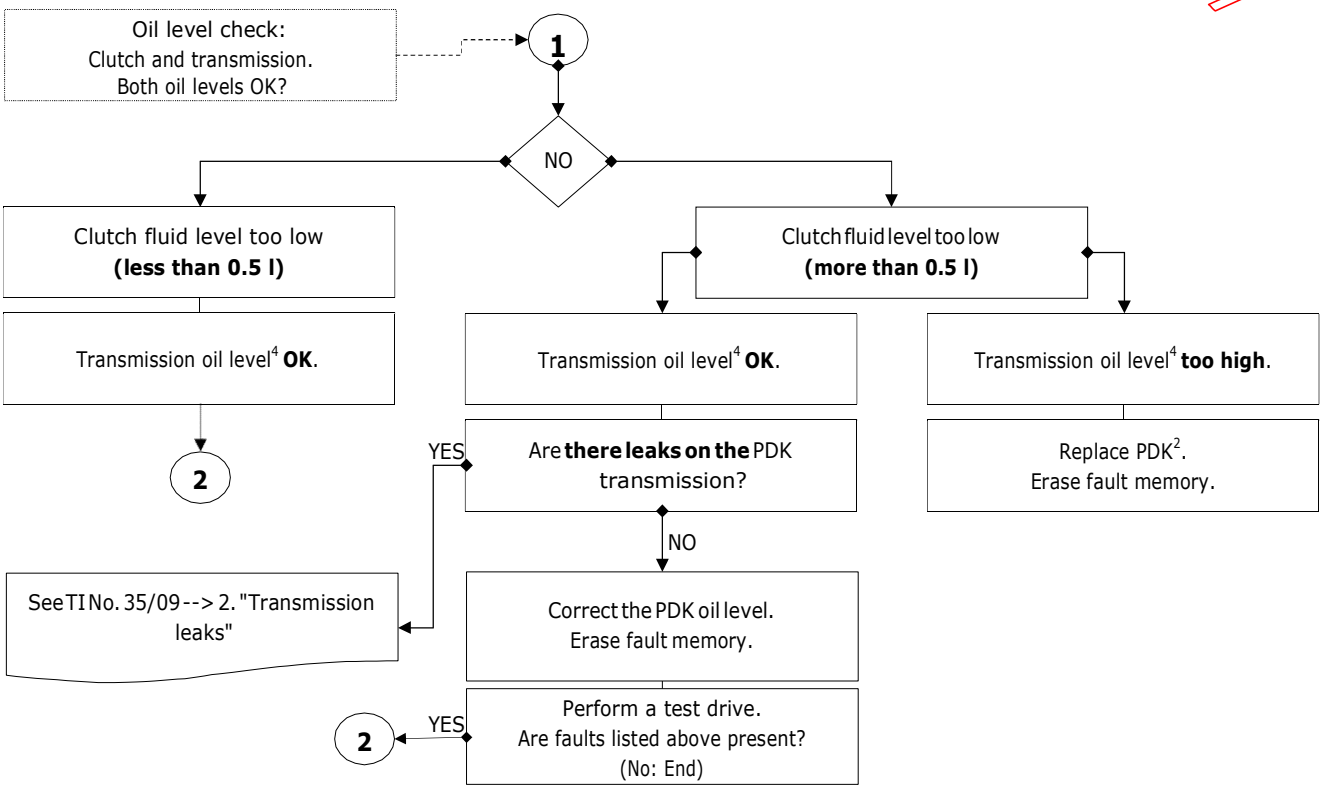
PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

[1] If the oil level is "OK", only a small amount of oil should emerge (max. 0.1 l).

[2] Perform engine torque loss adaptation and calibration after replacing parts. Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.

Flow chart
PS3 9x7



DME CU = DME control unit PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

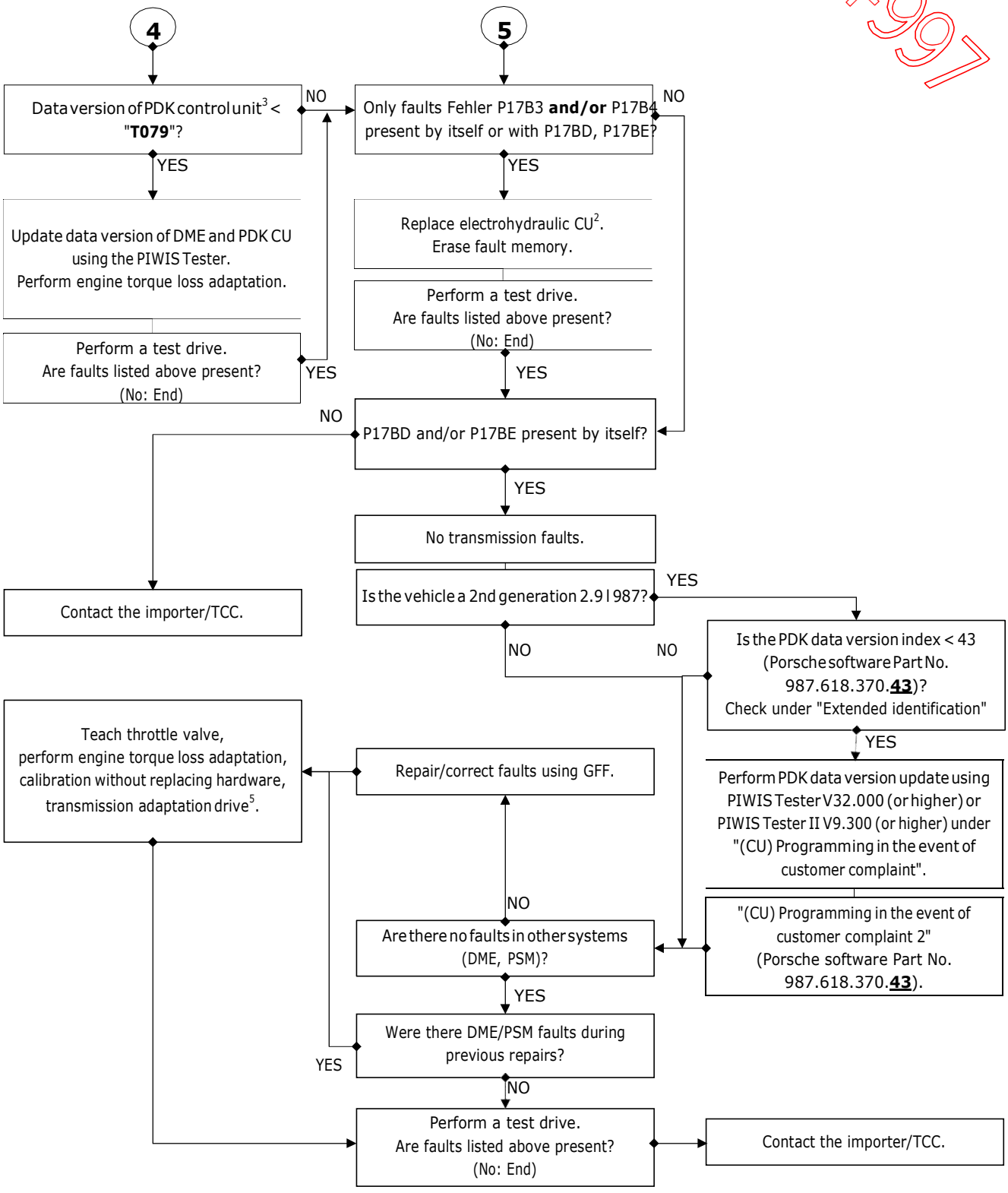
[2] Perform engine torque loss adaptation and calibration after replacing parts. Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.

[3] Data version in PDK control unit under => 'Actual values' => 'Identification' in PIWIS Tester and in VAL.

[4] If the oil level is "OK", only a small amount of oil should emerge (max. 0.1 l).

Pressure sensor - P0841, P0846, P17B1/..B2/..B3/..B4, P17BB/..BC/..BD/..BE

Flow chart PS3 9x7



DME CU = DME control unit PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

[2] Perform engine torque loss adaptation and calibration after replacing parts. Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.

[3] Data version in PDK control unit under => 'Actual values' => 'Identification' in PIWIS Tester and in VAL.

[4] If the oil level is "OK", only a small amount of oil should emerge (max. 0.1 l).

[5] Adaptation drive as per Technical Information Gr. 3 No. 25/09.

PORSCHE

Temperature sensor - P0711, P172D, P17F0, P17F1, P17F2

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

Flow chart SF4

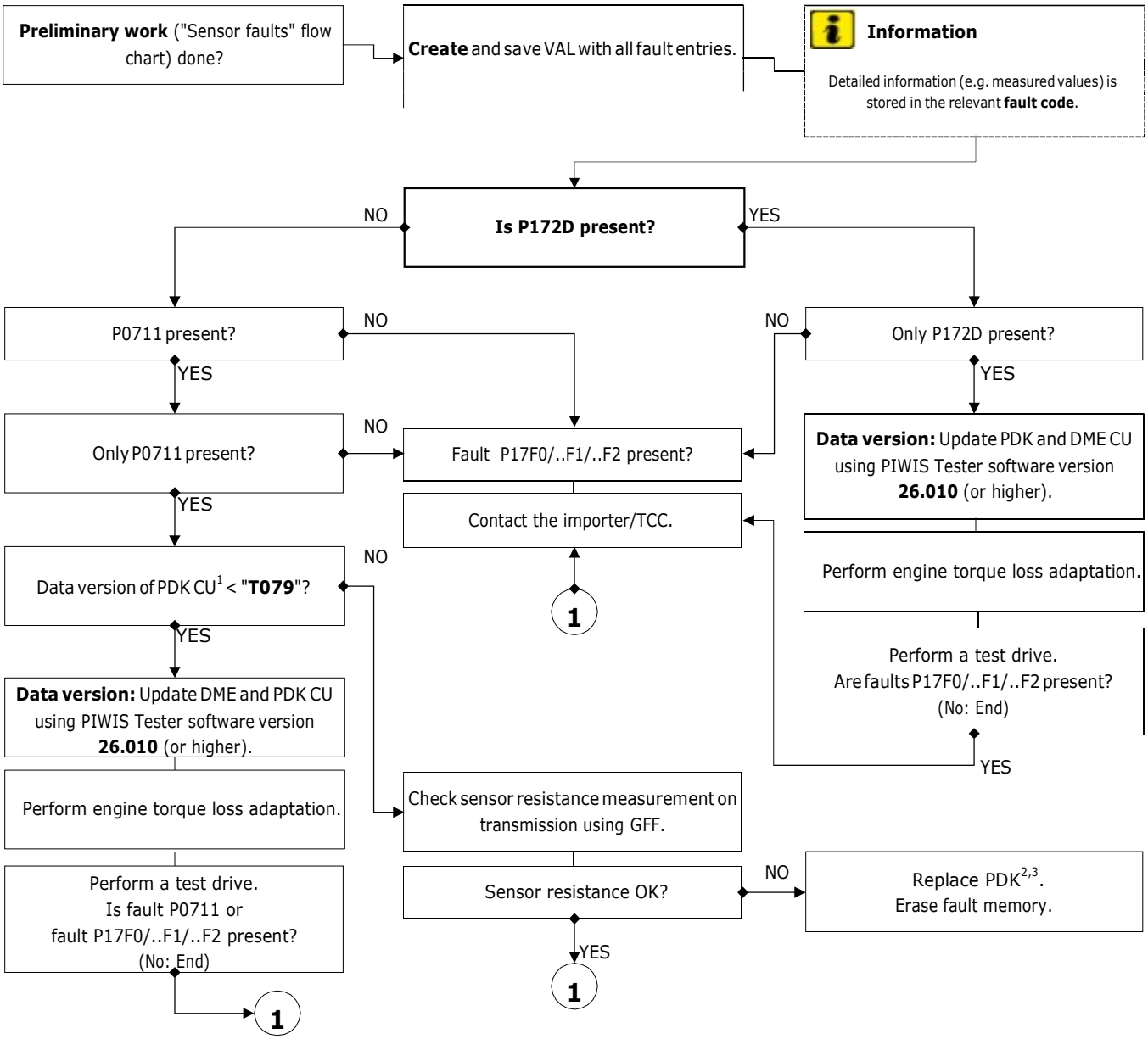
991 + 997

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

- ▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'
- ▶ Workshop Manual '387719 Removing and installing electrohydraulic control unit'
- ▶ Workshop Manual '373419 Removing and installing PDK transmission'



DME CU = DME control unit PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

[1] Data version in PDK control unit under ---> 'Actual values' ---> 'Identification' in PIWIS Tester and in VAL.

[2] Perform engine torque loss adaptation and calibration after replacing parts.

[3] Calibrate: Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.

[4] Replacement PDK CU: Control unit can be from another vehicle or new control unit. Do **not** program in either case.

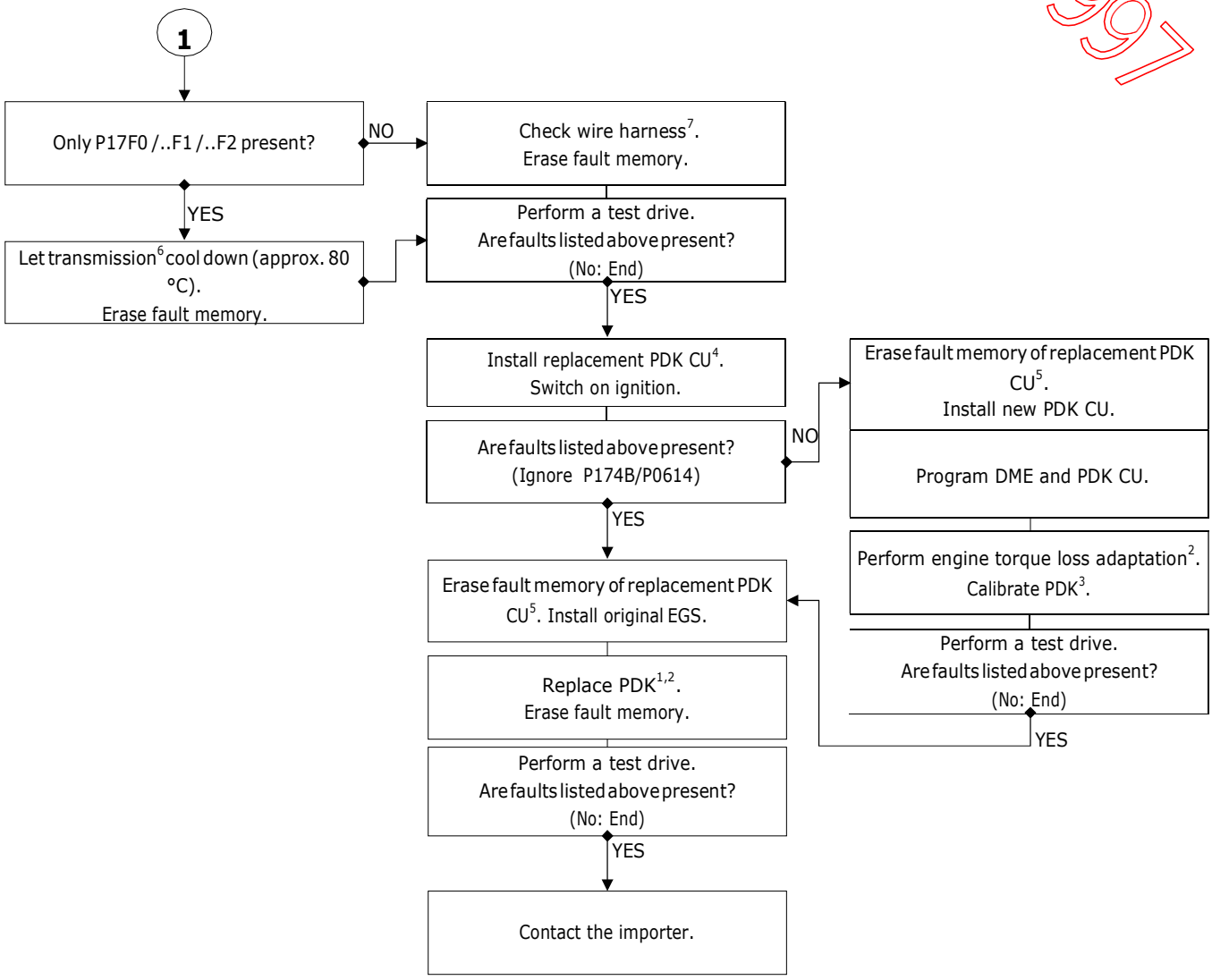
[5] Re-install control unit taken from another vehicle.

[6] Current transmission temperature below ---> 'Actual values'

[7] Check wire harness continuity; check plug connections on transmission and wire harness side for damaged connectors/sleeves and soiling; check that plug connections are seated correctly.

Temperature sensor - P0711, P172D, P17F0, P17F1, P17F2

Flow chart
SF4



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GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

[1] Data version in PDK control unit under ---> 'Actual values' ---> 'Identification' in PIWIS Tester and in VAL.
[2] Perform engine torque loss adaptation and calibration after replacing parts.
[3] Calibrate: Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.
[4] Replacement PDK CU: Control unit can be from another vehicle or new control unit. Do **not** program in either case.
[5] Re-install control unit taken from another vehicle.
[6] Current transmission temperature below ---> 'Actual values'
[7] Check wire harness continuity; check plug connections on transmission and wire harness side for damaged connectors/sleeves and soiling; check that plug connections are seated correctly.

Software faults

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

Flow chart SF5

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

- ▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'
- ▶ Workshop Manual '373419 Removing and installing PDK transmission'

Create and save VAL with all fault entries.

Information

Detailed information (e.g. measured values) is stored in the relevant **fault code**.

U0073 → Check wire harness[1]. → OK?
- YES → Replace PDK CU. Program PDK CU and DME CU if necessary[2]. Perform "Calibration after part replacement".
- NO → Repair component.

Uxxxx → No transmission faults (hardware/software) → Erase PDK fault memory. → Check control units in integrated system (CAN faults).

P0604 P0605 P0702 P1705 P18A0 P18B5 P186F P189A P189C P189D P1897 → Replace PDK CU. Program PDK CU and DME CU if necessary[2]. Perform "Calibration after part replacement".

P0602 → PDK CU not programmed. → Program PDK CU and DME CU if necessary[2].

P0603 P174E P18B0 → Program PDK and DME control unit[2] → Fault code still present? → Replace PDK CU. Program PDK CU[2]. Perform "Calibration after part replacement"

P0614 → DME data version not up-to-date. → Program DME CU and PDK CU if necessary[2].

P174C P1872 → Perform "Calibration after part replacement".

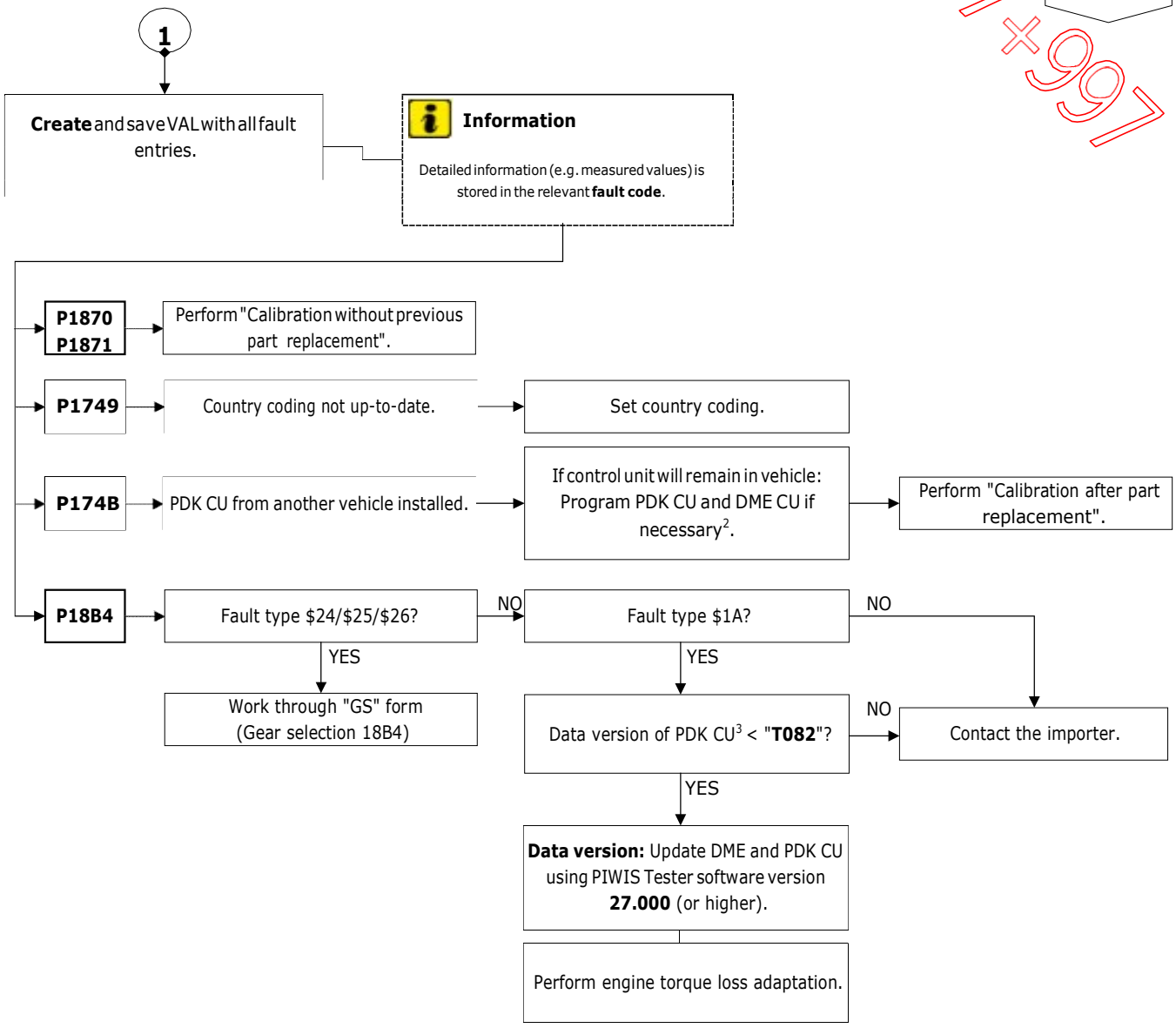
1

DME CU = DME control unit PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

[1] Check wire harness continuity; check plug connections on transmission and wire harness side for damaged connectors/sleeves and soiling; check that plug connections are seated correctly.

[2] Perform engine torque loss adaptation after programming PDK and DME control unit.

Software faults



DME CU = DME control unit PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung control unit

[2] Perform engine torque loss adaptation after programming PDK and DME control unit.

[3] Data version in PDK control unit under ---> 'Actual values' ---> 'Identification' in PIWIS Tester and in VAL.

PORSCHE

Gear selection

(3730 - Flow charts of PDK fault codes; see also Technical Information, Gr. 3, No. 35/09)

981+991

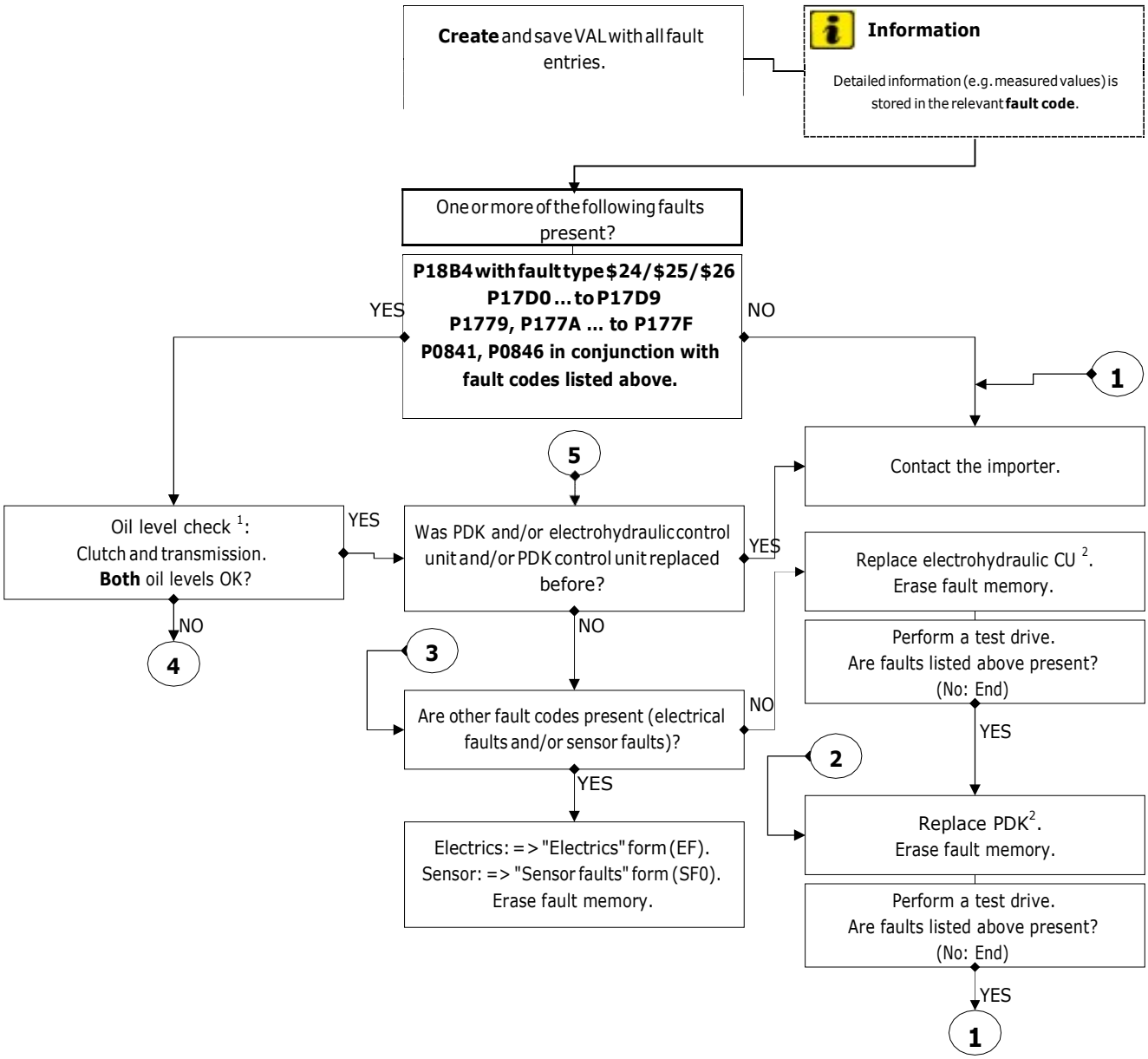
Flow chart GS

Information

- Make sure you have the **latest** PIWIS Tester 9718 software installed.
- If **components are replaced:** Return to Warranty **Test Centre and** document all measures in PQIS.

Reference material for the following work:

- ▶ Technical Information '0335 Vehicle Analysis Log (VAL) (15/08)'
- ▶ Workshop Manual '370235 Checking and topping up ATF (clutch fluid)'
- ▶ Workshop Manual '340135 Checking and topping up transmission oil'
- ▶ Workshop Manual '387719 Removing and installing electrohydraulic control unit'
- ▶ Workshop Manual '373419 Removing and installing PDK transmission'



PDK CU = PDK control unit Electrohydraulic CU = Electrohydraulic control unit

GFF = Guided Fault Finding with PIWIS Tester 9718 PDK = Porsche Doppelkupplung

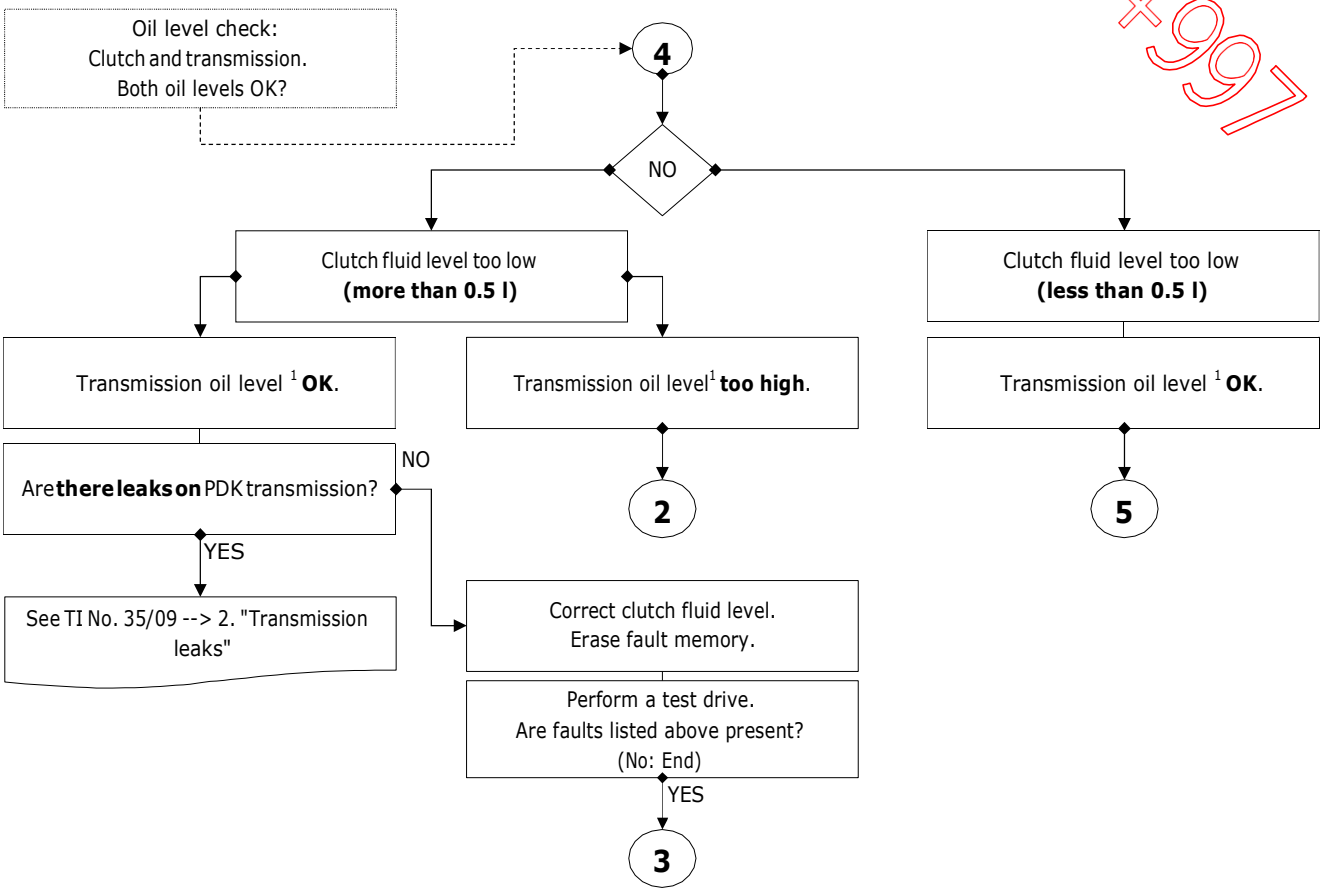
[1] If the oil level is "OK", only a small amount of oil should emerge (max. 0.1 l).

[2] Perform engine torque loss adaptation and calibration after replacing parts. Select "Calibration after part replacement" for PIWIS software version 25.000 or higher.

Gear selection

Flow chart
GS

981+997



[1] If the oil level is "OK", only a small amount of oil should emerge (max. 0.1 l).