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EGSFlash

USER GUIDE

Safe transmission firmware operations

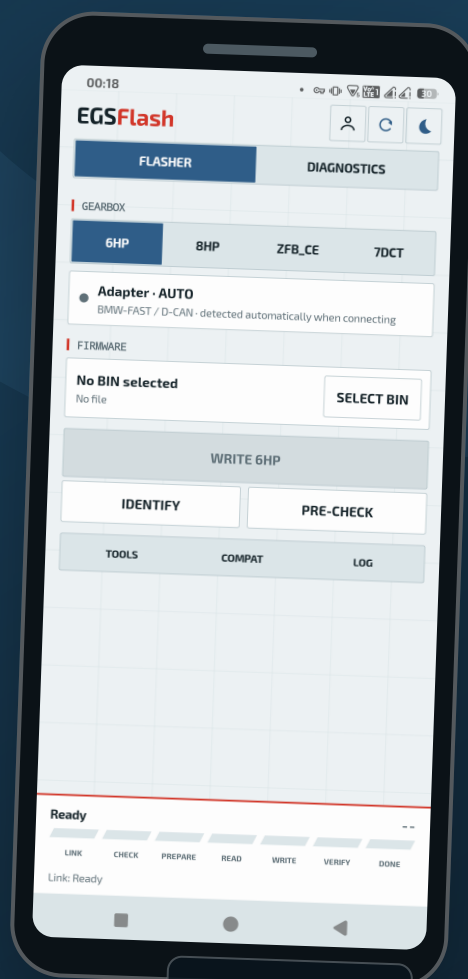
Connection, identification, reading, programming, diagnostics, and explicit recovery after an interruption.

ZF 6HP

ZF 8HP

ZFB_CE

Getrag 7DCT



Actual screenshot
of the current interface

Document revision: 10 Aug 2026
Developer: BinUnlock LLC
For the current signed EGSFlash build
Language: English

BEFORE YOU BEGIN

About this guide

EGSFlash is a professional local tool for analyzing a user-selected raw, unencrypted `.bin` file, diagnosing an EGS, and performing supported read or write operations.

! Programming changes the contents of the control unit.

A power failure, incorrect BIN, unsuitable adapter, or communication interruption can immobilize the vehicle. If you do not understand the purpose of the selected file and the route required for this transmission, do not start programming.

What the application does

- analyzes the selected BIN locally;
- performs a fresh identification of the connected EGS;
- checks compatibility, power supply, and vehicle state;
- maintains a protected record of a destructive operation;
- verifies the result after success and stores a local report.

What the application does not do

- does not select firmware by chassis or file name;
- does not make an arbitrary BIN compatible;
- does not bypass unknown transmission states;
- does not resume programming automatically after an interruption;
- does not guarantee the condition of the power supply, cable, or vehicle.

Validation scope

6HP has already been used in real-world operations. Standard 8HP, ZFB_CE first unlock, and the new 7DCT routes have protocol, unit, and fault-injection coverage; however, broad field data across real vehicles and the full adapter population is still being accumulated. An application refusal is a safeguard, not an error to bypass.

i This document and the installed version.

Check for a signed update before working. If this guide conflicts with a blocking message in the current application, stop: the EGSFlash decision based on fresh identification takes precedence.

EGSFlash is developed by BinUnlock LLC. The server is used for licensing, signed updates, and support. A firmware catalog and server-side vehicle selection do not participate in the runtime compatibility decision: that decision is made locally from the BIN and live identification.

NAVIGATION

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Entries are clickable in the PDF. Before your first programming session, read Chapters 1–6 and the entire chapter for your transmission.

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One page to review before work

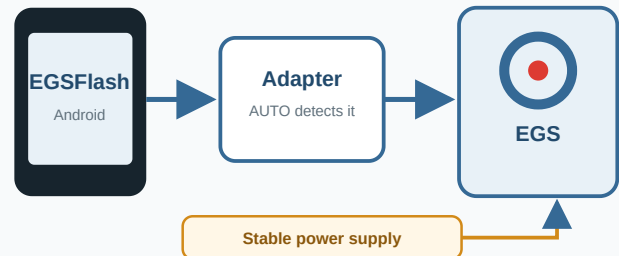
1

Preparing for work

Correct power and a stationary vehicle matter more than programming speed.

Equipment

- ☐ An Android device with sufficient charge and free storage.
- ☐ A compatible adapter for the selected family.
- ☐ A good-quality OTG/Ethernet/USB cable with secure connectors.
- ☐ A regulated power supply with adequate current capacity.
- ☐ The original raw, unencrypted BIN stored safely.
- ☐ Internet access for activation and update checking.



The phone controls the operation, the adapter carries the protocol, and the supply maintains power to the vehicle and EGS.

Vehicle state

Ignition

ON

Terminal 15 on. Do not start the engine.

Engine

STOP

For a hybrid, switch Vehicle Ready off as well.

Selector

P

Vehicle stationary and parking brake applied.

Voltage

Route	Software limit	Practical recommendation
6HP and DKG90	11.0–15.0 V	Target 12.0–15.0 V in operation, without voltage dips.
8HP, ZFB_CE, DKG02R	11.0–16.0 V	Use a stable regulated supply; the lower limit is not an operating target.



Do not rely on an ordinary ripple-prone battery charger as your only power safeguard. Switch consumers off, close the doors where practical, and do not move the phone between USB/Wi-Fi networks during the operation.

2

First launch and license

Activate the device and install the current signed build before connecting to the vehicle.

1

Install the APK from the official source. Do not use re-signed or modified copies: Android and EGSFlash verify the update signature.

2

Select the interface language. On the account screen, open *Interface language* and select *English* or the system language.

3

Sign in or register. Enter your email address, password, and a recognizable name for this Android device.

4

Wait for activation. Programming is available only to an approved account and device. The *License active* status means authorization is ready.

5

Check for updates. Tap the circular arrow on the main screen. The manifest, APK hash, and signing certificate are verified before the Android installer is opened.

Header buttons

- **Profile** — account, license, and local programming history.
- **Update** — manual check for a signed OTA.
- **Moon/sun** — light or dark theme.

Offline authorization

After a successful license check, the application may indicate that offline programming authorization is ready. Do not sign out or clear the application data before working.

!

Do not uninstall the application or clear its data while a checkpoint remains incomplete.

It contains protected information required for safe, explicit recovery of an interrupted programming operation.

Android permissions

Request	When it is needed	What to do
USB device access	K+DCAN USB serial through OTG	Allow EGSFlash to use the connected serial adapter.
Nearby devices	Bluetooth D-CAN for a supported 6HP or standard 8HP route	Grant this only when AUTO is actually qualifying Bluetooth. Bluetooth is prohibited for 7DCT.
Install unknown apps	Signed APK OTA update	Allow EGSFlash to open the system installer, then confirm the update.
Files/Downloads on older Android versions	Publishing a read BIN	Allow saving to <code>Downloads/EGSFlash</code> .

Understanding activation status

Active

Normal access is allowed.
Confirm that offline authorization is ready and updates have been checked.

Pending approval

Provide the displayed user ID for manual activation, then tap *Refresh activation*.

Suspended / revoked

Do not start a new operation.
An incomplete protected programming session may enable recovery-only access.

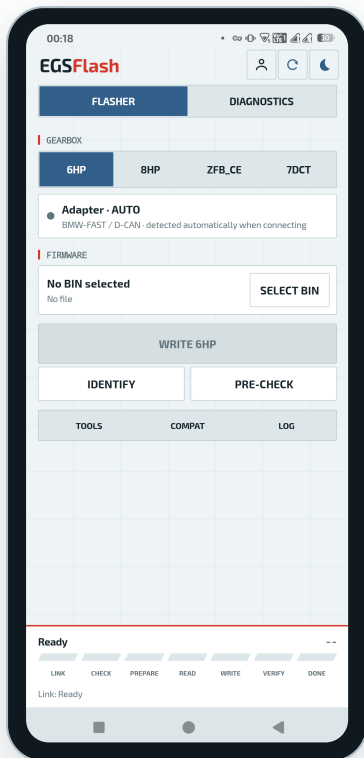
Before opening the flasher

- ☐ the license notice has been accepted;
- ☐ the account and this device both show *Active*;
- ☐ the latest signed version is installed;
- ☐ the source BIN is not stored as a single copy;
- ☐ application data has not been cleared since the previous operation.

3

Main screen

One screen shows the selected family, route, BIN, and operation state.



Actual screenshot from a 1080×2400 test phone. The screenshot is in English and matches the interface described here.

1

Flasher / Diagnostics.

Switches the mode, but not the transmission family.

2

6HP / 8HP / ZFB_CE / 7DCT.

Select the family before connecting. ZFB_CE is the separate first-unlock route.

3

Adapter · AUTO.

The application searches for an allowed transport and reports the selected route.

4

Select BIN.

Analysis runs locally. If it fails, programming is rejected before the control unit is accessed.

5

Identify / Pre-check.

Identify is available for every family; a separate Pre-check is available for 6HP and DKG90. These actions erase nothing.

6

Tools / Compatibility / Log.

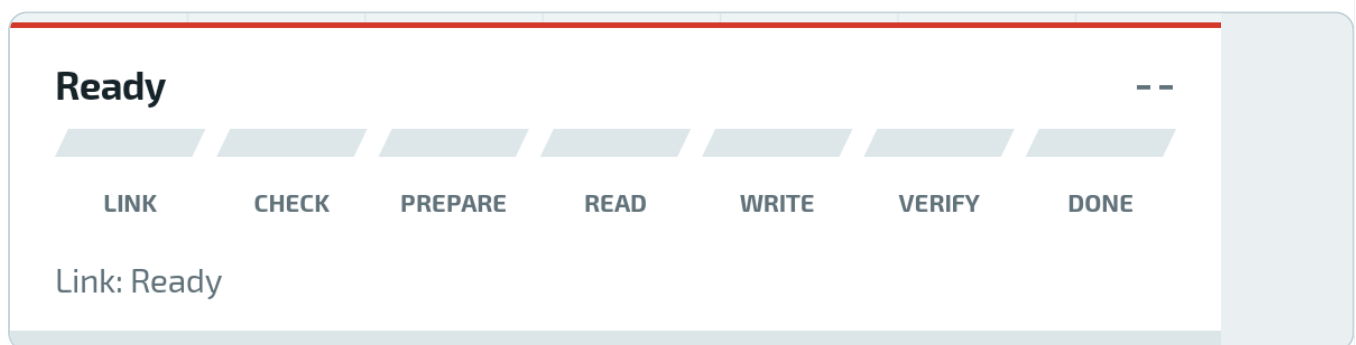
Additional read functions, the exact matrix for the current family, and the protocol log.

7

Phase bar.

Connect → Check → Prepare → Read → Write → Verify → Done.

Reading the lower panel



The text above the bar is the current status; the percentage at the right is overall progress. During a long operation, EGSFlash runs a foreground service and holds a WakeLock. If you switch to another application, the operation continues in the background.



Do not assume that an unchanged percentage means the application has frozen. Erasing, checksum calculation, reset, and waiting for ECU readiness can take time. Do not force-close the application or disconnect communication.

Additional real screens

Below are screenshots of the 6HP and 8HP modes from a publication by developer BinUnlock LLC. They clearly show the *Compatibility* panel. Some wording may vary by version, so always use the installed application as the current authority.

EGSFlash

FLASHER

DIAGNOSTICS

GEARBOX

6HP

8HP

ZFB_CE

7DCT

Adapter · AUTO

BMW-FAST / D-CAN · detected automatically when connecting

FIRMWARE

No BIN selected

SELECT BIN

PROGRAM THE 6HP GEARBOX

IDENTIFY

?

PRE-CHECK

?

Tools

Compat

?

Log

AUTO BMW-FAST/D-CAN: K+DCAN USB, MHD, bootmod3, Thor/XHP Wi-Fi or paired Bluetooth D-CAN
Wireless programming requires live EGS adapter-control proof
A passive yellow ENET cable is not electrically compatible with E-series D-CAN
MINI F55/F56/F57 T8HP uses a separate UDS/ENET route; physical programming remains blocked
BIN: 1,048,576 bytes

MG GKE191 6HP26/32 MPC562
MH GKE211 6HP19 MPC562
ZP GKE194 6HP26/32 MPC555
ZS GKE214 6HP19 MPC555
SL GKE195 6HP26TU/32TU MPC562
SM GKE215 6HP19/TU MPC562

Supported part/HW numbers (45):

Ready

LINK

CHECK

PREPARE

READ

WRITE

Link Ready

ZF 6HP

AUTO BMW-FAST/D-CAN and the expanded compatibility matrix.

EGSFlash

FLASHER

DIAGNOSTICS

GEARBOX

6HP

8HP

ZFB_CE

7DCT

Adapter · AUTO

ENET / HSFZ · detected automatically when connecting

Route is selected after identification

FIRMWARE

No BIN selected

SELECT BIN

PROGRAM THE 8HP GEARBOX

IDENTIFY

?

PRE-CHECK

?

Compat

?

Log

AUTO ENET/HSFZ: USB OTG + Ethernet with yellow ENET cable, generic ENET Wi-Fi, MHD or bootmod3
HSFZ TCP 6801

EGS-GKEB23 SGBD=988336 BIN=2097152 bytes
EGS-GKEB23TU SGBD=988344 BIN=2621440 bytes
EGS-GKEHY23 SGBD=989328 BIN=2097152 bytes
EGS-GKEG3HY SGBD=991008 BIN=2621440 bytes
EGS-ZFB_CC SGBD=991696 BIN=2621440 bytes
EGS-ZFBHY SGBD=991712 BIN=4194304 bytes
EGS-ZFB_CE SGBD=992720 BIN=4,194,304 bytes [UNLOCKED only]

GKE*: direct UDS/ENET
ZFB_CC, ZFBHY, unlocked ZFB_CE: ZFBB DIAGUMP · Wi-Fi/CAN ISO-TP

Ready

LINK

CHECK

PREPARE

READ

WRITE

Link Ready

ZF 8HP

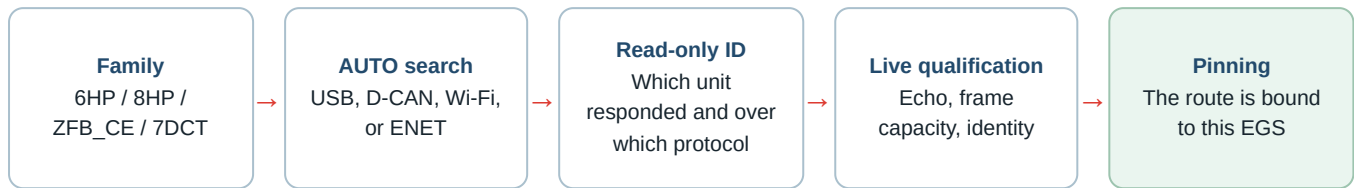
AUTO ENET/HSFZ and the list of BIN profiles/sizes.

Screenshot source: the “EGSFlash BMW Gearbox Flasher” publication on binunlock.com. The screenshots contain no VIN, account details, license keys, or adapter address.

4

Connection and AUTO

The user selects the family; the application determines the safe route.



i After the destructive stage begins, AUTO does not select an arbitrary different adapter. Only retries and transitions in the pre-proven plan are allowed. For a LOCKED ZFB_CE, returning from TCU_TSW to the pinned ordinary EGS is a mandatory part of that plan.

Practical adapter matrix

Family	Supported AUTO route	Do not use
6HP E-series	K+DCAN USB FTDI; qualified MHD, xA, bootmod3, and Thor/xHP Wi-Fi D-CAN; Bluetooth D-CAN only after live control qualification.	Yellow passive ENET; an arbitrary manually entered Wi-Fi endpoint.
Standard 8HP / ZFB_CE UNLOCKED	Preferably ENET/HSFZ: yellow ENET plus USB-Ethernet, ENET Wi-Fi, MHD, xA, or bootmod3. Only a qualified BMW-FAST/D-CAN route is allowed.	An unqualified D-CAN endpoint.
ZFB_CE LOCKED	A pinned ordinary EGS ENET/fixed TCP endpoint plus a separate stock Wi-Fi ISO_TP_TELEGRAM handoff through xA, MHD mode 3, or bootmod3.	K+DCAN, USB, Bluetooth, CAN_ECON.
DKG90	K+DCAN USB or qualified MHD/xA/Thor BMW-FAST Wi-Fi D-CAN.	ENET and Bluetooth.
DKG02R	K+DCAN/qualified BMW-FAST Wi-Fi D-CAN or ENET/HSFZ.	Bluetooth.

Connection procedure

- 1 Connect the power supply to the vehicle and wait for the voltage to stabilize.
- 2 Connect the adapter to OBD, and only then to the phone or Wi-Fi network.
- 3 For Wi-Fi, disable VPN and prevent the phone from switching to another network because internet access is unavailable.
- 4 Open EGSFlash, select the family, and tap **Identify**. Do not begin with the programming button.

5

Identification and condition checks

Identify is available for every family; a separate Pre-check is available only for 6HP and DKG90.

ID

Identification

Connects through AUTO and reads the family, hardware data, Variant/SGBD, BTLD/SVK/XWE, serial number, and software version, depending on the transmission.

It answers: "What is physically connected, and which route is allowed?"

OK

Pre-check

A separate button is available for 6HP and DKG90. It checks engine state, ignition, selector position, voltage, and the adapter's ability to support programming.

8HP, ZFB_CE, and DKG02R: the mandatory UDS preflight runs automatically when programming starts, before any destructive operation.



Identification and the separate Pre-check are safe for firmware memory. They erase and write nothing. The automatic UDS preflight also finishes before erase; stable power and communication are still mandatory.

Correct sequence

1

Select the family that matches the expected transmission.

2

Tap Identify. Wait for the adapter and the result. For 7DCT, AUTO distinguishes DKG90 KWP from DKG02R UDS.

3

Open Compatibility. Check Variant/SGBD/BTLD, BIN size, and **LOCKED/UNLOCKED** state.

4

For 6HP or DKG90, tap Pre-check. For 8HP, ZFB_CE, and DKG02R, prepare all conditions in advance: the mandatory preflight starts automatically with programming.

5

Only then select the BIN. Compatibility is determined from the file contents and fresh live identification, not from the file name.



6HP does not claim direct vehicle-speed measurement. The application checks engine state, ignition, and selector position P; ensuring that the vehicle is actually stationary remains the operator's responsibility.

6

General programming procedure

Family-specific differences are described in the following chapters; this sequence applies to all families.

CONNECT

CHECK

PREPARE

READ

WRITE

VERIFY

DONE

1

Run Identify. For 6HP/DKG90, also run the separate Pre-check. For UDS families, the programming workflow itself starts the mandatory preflight before erase. Confirm that AUTO reports the expected route.

2

Tap Select BIN. Wait for *BIN ready*. Programming will not start if analysis fails.

3

Check the power conditions again. Engine STOP, ignition ON, selector P, parking brake applied, and a stable power supply.

4

Tap the programming button. Read the family-specific warning carefully, then tap *Start programming*.

5

Do not interfere. EGSFlash identifies the unit again, prepares a copy of the BIN, repeats the live checks, and commits the checkpoint before the first erase.

6

Wait for verification. After transfer, the application checks the blocks, performs the required reset, restores coding/VIN where applicable, and performs a fresh readback of the result.

7

Finish only when the application reports Operation completed. Keep the local report and source BIN.

Before the first erase

- BIN size and structure are checked;
- the source SHA-256 is calculated;
- live identity/SVK is repeated;
- profile-specific file preparation runs; DKG90 preserves the original RAW bytes;
- power conditions and programming authorization are checked.

After the first erase

- do not change the adapter or network;
- do not run diagnostics in parallel;
- do not delete the BIN;
- do not clear application data;
- after an interruption, follow only the recovery banner.



The Android Back button does not cancel programming. The operation may continue in the background. There is no active “safe cancel” after the destructive stage has begun.

7 ZF 6HP E-series

Field-proven BMW-FAST/KWP route: programming and a 1 MiB full-layout read.

Supported variants

6

MG, MH, 2P, 2S, SL, SM

BIN size

1 MiB

1,048,576 bytes

Protocol

KWP

BMW-FAST / D-CAN

Programming 6HP

1. Select **6HP** and run identification.
2. Confirm that the application recognizes VariantIndexS and a supported HW/part number.
3. Connect K+DCAN USB or a qualified compatible D-CAN route through AUTO.
4. Select an exact 1,048,576-byte BIN and wait for analysis.
5. Run Pre-check: engine stopped, ignition on, selector P, voltage 11–15 V; practical target 12–15 V.
6. Confirm programming. The application repeats Variant/HW/BCBS, prepares the native checksum, and commits the checkpoint before erase.

! MINI T6HP UDS is not part of this route. Do not attempt to program it by selecting standard 6HP.

Full 6HP read

- 1 Select **6HP**, open **Tools**, and tap **Read full 6HP**.
- 2 Read the warning and tap **Start read**.
- 3 EGSFlash performs a fresh Variant/HW identification and sends only KWP `ReadMemoryByAddress 0x23`.
- 4 After repeated verification probes and SHA-256 calculation, the file appears in `Downloads/EGSFlash`.

i **Why some windows contain FF.** For 2P/2S/SL/SM, inaccessible standard ranges are not requested from the ECU and are reproduced as `FF` according to the validated address map. The read operation uses no programming session, authentication, erase, or write commands.

8

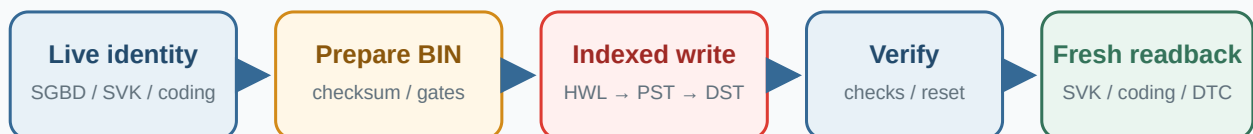
Standard ZF 8HP

Indexed HWL/PST/DST programming through the UDS EGS.

Profile	SGBD / application	Exact BIN size
GKEB23, GKEHY23	Supported early 8HP profiles	2,097,152 bytes
GKEB23TU, GKEG3HY, ZFB_CC	Supported 2.5 MiB profiles	2,621,440 bytes
ZFBHY	Supported 4 MiB profile	4,194,304 bytes

How to program

- 1 Select **8HP**, not ZFB_CE, and connect using the preferred ENET/HSFZ route through AUTO.
- 2 Run Identify. Check SGBD, BTLD/SVK/XWE, and the displayed route.
- 3 Select a BIN of the exact required size. The application binds the file blocks to the live profile.
- 4 Provide 11–16 V, engine STOP, and ignition ON. When programming starts, EGSFlash automatically runs the mandatory UDS preflight; for a hybrid profile, it also checks Vehicle Ready and the pump.
- 5 Confirm programming. Before erase, EGSFlash repeats identity, checksum, counters, coding, and live-state checks; the final check must be no more than 30 seconds old.



! Do not use the standard 8HP button for a factory ZFB_CE in the LOCKED state. Use the separate ZFB_CE option and follow the special requirements in the next chapter.

9

ZFB_CE

SGBD 992720: standard UNLOCKED programming or an isolated two-stage LOCKED first unlock.

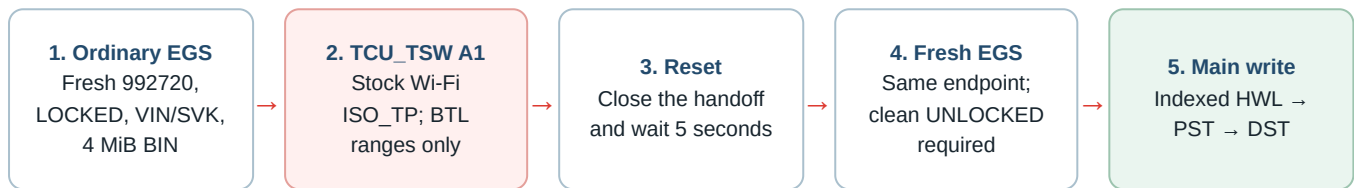
UNLOCKED state

Select standard **8HP**. EGSFlash performs indexed main HWL/PST/DST programming of a 4,194,304-byte BIN.

LOCKED state

Select the separate **ZFB_CE** option. The application must prove the exact two-stage route before the first BTL erase.

Two-stage LOCKED route



! ZFBB/TCU_TSW never receives the full 4 MiB main BIN. Only the two validated BTL ranges are written through it. The application must then close that channel and identify the ordinary EGS again.

Mandatory conditions

- ☐ exact SGBD 992720 and fresh LOCKED classification in the application session;
- ☐ an exact 4,194,304-byte BIN, a supported ZFFD, and valid BTL CRCs/markers;
- ☐ a pinned ordinary EGS ENET/HSFZ or fixed TCP endpoint that can be restored;
- ☐ a separate, ready stock Wi-Fi ISO_TP_TELEGRAM/DIAG_JMP handoff through xA, MHD mode 3, or bootmod3;
- ☐ after handoff: fresh VIN and serial, complete SVK, application session, and clean UNLOCKED state;
- ☐ 11–16 V and engine STOP; for a hybrid profile, Vehicle Ready OFF and a safe pump state as well.

! **Hard-blocked:** ECC, boot, or unknown; HWEL 00004326-030.014.004 and 0000435F-030.013.003, which require custom BLUP; K+DCAN/USB/Bluetooth/CAN_ECON for first unlock; and any endpoint that cannot be restored exactly after BTL.

10

Getrag 7DCT

AUTO first distinguishes E-series DKG90 from F-series DKG02R using read-only identification.

DKG90 / TV

Protocol: BMW-FAST/KWP.

BIN: 1,540,096 bytes.

Eligibility: only Variant `TV`, target HW `8606066`, and one of 43 validated factory HW variants.

Programming: PST and DST as complete ranges, with no 0xFF optimization; a separate durable KWP checkpoint.

Adapter: K+DCAN or qualified BMW-FAST Wi-Fi D-CAN.

DKG02R

Protocol: UDS BMW-FAST or ENET/HSFZ.

SGBD: `989296`.

BTLD 10F0-000.003.xxx: 1,540,096 bytes.

BTLD 1F6C-001.001.xxx: 2,621,440 bytes.

Programming: PST/DST only on an already-unlocked unit.

Standard procedure

- 1 Select **7DCT** and tap Identify. Do not choose DKG90/DKG02R manually; AUTO determines it.
- 2 Open *Compatibility* and check the detected route, Variant/HW, or SGBD/BTLD.
- 3 Select only a BIN with the exact size required by the detected profile.
- 4 For DKG90, run the separate *Pre-check*: RPM, power, ignition, and selector P are checked twice. For DKG02R, the mandatory UDS preflight and a fresh application session are checked automatically when programming starts.
- 5 Confirm programming and do not change the adapter. If the operation is interrupted after erase, do not start a new programming operation; use only explicit recovery from the checkpoint.



DKG02R must freshly report UNLOCKED immediately before checkpoint/session/erase. EGSFlash sends `ReadDevelopmentInfo 0x0205` using the exact live BTLD. `LOCKED`, ECC, boot, unknown, an incorrect minor BTLD, or a malformed response stops the operation before erase. OEM BTL first unlock is not implemented; do not bypass the refusal by choosing another family, BIN, or adapter.

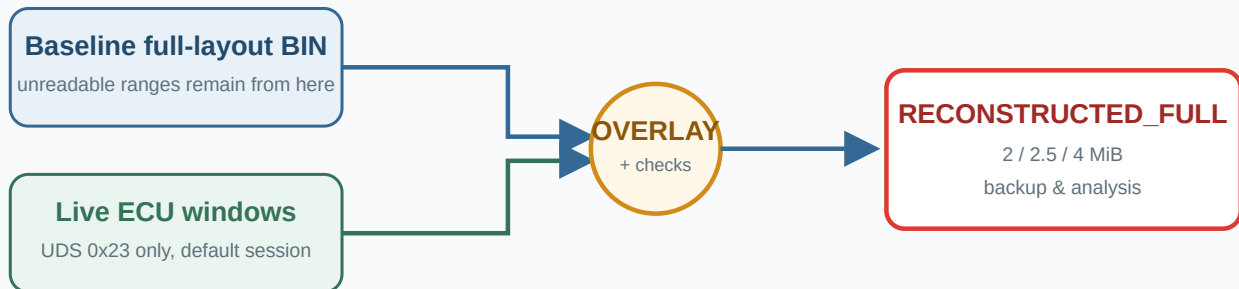
11

Reconstructing a full 8HP image

This is a baseline-overlay reconstruction, not a physical full dump of ECU contents.



RECONSTRUCTED_FULL is intended for backup and analysis. Bytes outside the ECU-readable windows remain from the selected baseline BIN. OEM authenticity and flash readiness are not proven. Any later write is a separate operation and must pass every write safety gate.



How to perform reconstruction

- 1 Select standard **8HP**, not ZFB_CE first unlock.
- 2 Tap **Select BIN** and choose a compatible baseline full-layout BIN.
- 3 Open **Tools** → **Reconstruct full 8HP**.
- 4 Confirm the read-only operation. EGSFlash enters only the default session, performs a fresh SGBD/SVK/XWE read, and checks the baseline.
- 5 The application requests only proven `ReadMemoryByAddress 0x23` windows, repeats boundary probes, and overlays them on the baseline.
- 6 After exact-size, SHA-256, and fsync checks, the result appears in `Downloads/EGSFlash`.



Only part of the file is physically read: approximately 25% for GKEB23/GKEHY23 and 2.5 MiB profiles, 28.125% for ZFBHY, and 18.75% for ZFB_CE. Reconstruction prohibits programming session, SecurityAccess, RoutineControl, erase, download/transfer, write, and ECUReset; a mismatched baseline causes refusal before the file is published.

12

Diagnostics

A separate tab for 6HP, 8HP, and 7DCT.

Read-only

- **Read faults** — displays DTCs and status.
- **Read adaptations** — shows available values.
- The result remains on screen in a monospaced panel.

State-changing commands

- **Clear faults** — requires confirmation and removes DTC history.
- **Reset adaptations** — validated only for 6HP.
- Diagnostics are blocked during programming.

Reading faults or adaptations

1. Open the **Diagnostics** tab.
2. Select 6HP, 8HP, or 7DCT.
3. Leave the adapter on AUTO and tap the required read-only button.
4. Record the code and status before clearing; they are important for finding the cause.

Clearing faults

Switch the ignition on, stop the engine, and provide stable power. After confirmation, the family-specific clearing sequence and a verification read are performed. The vehicle's fault history will be deleted.

Resetting 6HP adaptations

! Use this only after a justified repair or calibration change. The KWP 0xA0 procedure erases learned shift and fill values. The transmission then requires a controlled adaptation drive.

- ☐ 6HP is selected;
- ☐ ignition ON, engine STOP;
- ☐ vehicle stationary, selector P;
- ☐ voltage stable;
- ☐ you understand the subsequent adaptation procedure.

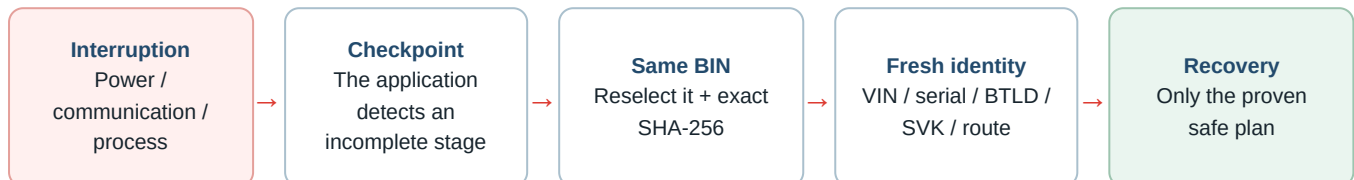
! No universal adaptation-reset command is offered for 8HP or 7DCT. Do not select a different family to enable the button.

13

Explicit recovery

After a destructive checkpoint, normal operations are intentionally blocked.

! **Do not experiment after an interruption.** Do not run Identify or diagnostics, do not select another BIN, and do not clear application data. Recovery never starts automatically and never continues from an arbitrary byte offset.



What to do

- 1 Maintain power.** If possible, do not switch off the ignition or disconnect the adapter until the state has been assessed.
- 2 Open EGSFlash.** A red banner reports the interrupted programming operation and shows the family, stage, and SHA-256.
- 3 Select exactly the same source BIN again.** Do not use a prepared temporary file or a similar version.
- 4 Tap Start recovery and read the summary.** Before ECU I/O, the application verifies the operation ID, profile, VIN, serial, BTLD/SVK, hash, and required route.
- 5 Confirm.** For an early destructive stage, the plan may safely rewrite selected blocks from the beginning; already-verified post-flash stages must not be erased again.
- 6 Wait for final verification and success accounting.** Only then is the checkpoint cleared.

Why recovery does not resume from a percentage

After a response is lost, it is impossible to determine safely which byte was physically written. EGSFlash stores block/segment boundaries and selects a proven strategy: a full restart of the selected plan or post-flash verification only. Arbitrary offset-based resume is prohibited.

14

Troubleshooting

Most refusals before erase are normal fail-closed safeguards.

Message/symptom	What to check	Safe action
Adapter not found	OTG, USB permission, OBD power, Wi-Fi network, VPN, and family support.	Disconnect/reconnect the adapter before the operation, then repeat Identify.
BIN not ready / incorrect size	The file must be a raw <code>.bin</code> , not an archive or encrypted package; its size must exactly match the profile.	Select the correct source file. Do not pad or truncate it manually.
Identity/SVK/XWE mismatch	The BIN is intended for another unit or live firmware state.	Stop and obtain a compatible BIN; do not bypass the comparison.
Voltage too low/high	Power-supply terminals, current capacity, consumers, and charger mode.	Stabilize power; repeat Pre-check for 6HP/DKG90 or restart the UDS programming workflow.
DKG02R LOCKED/ECC/boot	This state is unsupported for main write.	Do not program it; a separate OEM/bench procedure is required.
ZFB_CE handoff unavailable	No pinned ordinary EGS endpoint or stock Wi-Fi ISO_TP route is available.	Do not begin unlocking. Prepare both routes in advance.
No visible progress	Status, log, and foreground-service notification.	Wait; do not force-stop or disconnect power.
Red recovery banner	A durable checkpoint exists.	Select the exact BIN again and perform only Explicit recovery.

Safe troubleshooting sequence

1. Record the exact visible status and family.
2. Open **Log** and save the last entries.
3. Do not repeat a destructive command manually.
4. If the application offers a full support bundle, review its contents and provide consent only when you understand them.
5. After a fix becomes available, install only the signed OTA.



The support bundle does not contain the selected BIN, password, or account tokens. It may contain VIN/HW in the protocol trace and details about Android, the network, and the adapter. Sending the full bundle requires explicit consent.

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Files, history, and support

Know what is stored locally and what may be sent to the server.

Downloads/EGSFlash

Result	Contents	Purpose
Full 6HP read	Verified 1 MiB file plus displayed SHA-256.	6HP backup based on the exact factory map.
*_RECONSTRUCTED_FULL.bin	Baseline full layout plus freshly read 8HP windows.	Backup/analysis; not proof of OEM authenticity.

Local programming history

The profile contains reports for confirmed successful programming operations: vehicle/transmission, file and SHA-256, duration, adapter, route, minimum voltage, retries/timeouts/NRCs, and final verification result. The detailed report is encrypted on the device and is deleted together with EGSFlash application data.

Automatic concise success report

May include transmission type, adapter/route, phase durations, retries, timeouts, NRCs, voltage, and result.

Does not include VIN, EGS serial, HW/part/ZUSB, BIN contents, or raw trace.

Full support bundle

Sent only after explicit consent and may contain a trace with VIN/HW, logs, crash data, Android details, network information, and adapter information.

Does not include the BIN, password, tokens, or files belonging to other applications.

Signed updates

EGSFlash verifies the manifest, APK size and SHA-256, package name, version number, and the same Android signer. If a vehicle operation is active, the update is deferred. After download, installation is confirmed in the Android system installer.



Do not install an APK received through an arbitrary messaging service over the application. If Android reports an incompatible signature, do not uninstall the current version—especially when a checkpoint exists—and contact support.

Storing the source BIN

- ☐ store the source file and its SHA-256 separately from the phone;
- ☐ do not rename the only copy without recording its hash;
- ☐ do not delete the file until the checkpoint or recovery is fully closed;
- ☐ do not publish VIN-related logs without understanding their contents.

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Quick reference

Review this page immediately before connecting to the vehicle.

Before programming

- ☐ Current signed version and active license.
- ☐ Correct family selected.
- ☐ Power supply connected and stable.
- ☐ Ignition ON, engine STOP, selector P, parking brake applied.
- ☐ Identify completed with the expected identity.
- ☐ For 6HP/DKG90, Pre-check passed; for UDS, conditions prepared for automatic preflight.
- ☐ Exact-size BIN and its SHA-256 saved.
- ☐ AUTO reports a qualified route.

During programming

- ☐ Do not touch power or ignition.
- ☐ Do not disconnect the phone or adapter.
- ☐ Do not change Wi-Fi/Bluetooth/VPN.
- ☐ Do not run other diagnostics.
- ☐ Do not force-stop the application.
- ☐ Wait for *Operation completed*.

Five rules that protect the EGS

- 1 Identify first, then select the BIN.** The file name proves nothing.
- 2 The lower voltage limit is not an operating target.** Use a powerful regulated supply.
- 3 Do not bypass a fail-closed refusal.** LOCKED/ECC/boot/unknown means stop for an unsupported route.
- 4 After erase, follow only the pinned plan.** An unplanned fallback is prohibited; the ZFB_CE transition from TCU_TSW to the same EGS is already part of the proven plan.
- 5 After an interruption, use only the exact BIN and Explicit recovery.** Do not start a new programming operation from scratch.

! **Stop immediately if:** DKG02R reports LOCKED/ECC/boot/unknown; a LOCKED ZFB_CE does not have both proven routes; a recovery checkpoint exists; or you are about to treat `RECONSTRUCTED_FULL` as automatically flash-ready. When in doubt, a refusal before erase is safer than “trying to see whether it works.”

REFERENCE

Glossary

AUTO

Automatic discovery and live qualification of an allowed transport.

BIN

A raw, unencrypted binary firmware image.

BTLD / BTL

The bootloader component of the control-unit software.

Checkpoint

An atomically stored state of a destructive operation used for Explicit recovery.

DKG90

E-series Getrag 7DCT, Variant TV, KWP/BMW-FAST.

DKG02R

F-series Getrag 7DCT, SGBD 989296, UDS.

EGS

Electronic transmission control unit.

ENET / HSFZ

BMW Ethernet diagnostics, normally TCP port 6801 after discovery.

HWL / PST / DST

Logical software components of a UDS profile.

KWP / BMW-FAST

KWP is the 6HP/DKG90 diagnostic protocol. BMW-FAST is BMW transport framing, also used on qualified D-CAN UDS routes.

RECONSTRUCTED_FULL

A baseline full layout with live-readable 8HP windows overlaid onto it.

SGBD

Identifier for the control unit's diagnostic description/family.

SVK / XWE

Live software-component list and identifiers.

UDS

Unified Diagnostic Services, the protocol used by modern 8HP/DKG02R units.

UNLOCKED / LOCKED

Bootloader state that determines whether main programming is allowed.

ZFB_CE

Third-generation 8HP, SGBD 992720, with a separate first-unlock route.



The current matrix is always available in the application. Select a family and open *Compatibility* to see the profiles, sizes, and restrictions for the installed build.

EGSFlash

Work calmly. Check twice. Never bypass a protective refusal.

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